City of Ontario, California

2018 Hazard Mitigation Plan

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Section 1. Introduction

The HMP update is a "living document" that should be reviewed, monitored, and updated to reflect changing conditions and new information. As required, the HMP must be updated every five (5) years to remain in compliance with regulations and Federal mitigation grant conditions. In that spirit, this Hazard Mitigation Plan (HMP) is an update of the City of Ontario Hazard Mitigation Plan approved by FEMA on July 23, 2011.

1.1 City of Ontario, California

The City of Ontario is located in the Inland Empire in Western San Bernardino County, approximately 35 miles east of Los Angeles and 20 miles west of San Bernardino on a flat alluvial plain at the base of the San Gabriel Mountains. The City is bordered by the neighboring cities of Upland, Montclair, Chino, Rancho Cucamonga, and Fontana.

City of Ontario
303 East "B" Street
Ontario, California 91764
Telephone: 909.395.2010
Fax: 909.395.2000
www.ontarioca.gov

Latitude: 34° 03' N, Longitude:117° 37' W
Elevation: 925 ft./288.257 m above sea level Land area: 49.8 square miles City Incorporated: 1891
Government Type: City Council/City Manager
County: San Bernardino
State: California
Time Zone: Pacific Standard Time
Area Code: (909)
Zip Codes: 91758, 91761, 91762, 91764
Population (2010): 173,690
Nearest cities:

- Upland, CA – 4.7 miles
- Chino, CA – 4.9 miles
- Montclair, CA – 4.9 miles
- Rancho Cucamonga, CA – 5.9 miles
- Claremont, CA – 7.4 miles
- Chino Hills, CA – 8.5 miles
- Pomona, CA – 8.8 miles
- Fontana, CA – 14.2 miles

Nearest city with population 200,000+: Riverside, CA (17.5 miles, pop. 255,166)
Nearest city with population 1,000,000+: Los Angeles, CA (51.5 miles, pop. 3,694,820)

The City of Ontario is 50.1 square miles in size and has the 10, 60 and 15 freeways traversing the community.

1.2 Planning Process

1.2.1 Preparing for the Plan

References

- 2011 City of Ontario Hazard Mitigation Plan
- 2014 City of Ontario Community Climate Change Action Plan
- 2013 San Bernardino County Regional Greenhouse Gas Emissions Inventories and Reduction Plan
- 2005 City of Ontario Hazard Mitigation Plan
- 2011 San Bernardino County Hazard Mitigation Plan
- 2010 State of California Hazard Mitigation Plan
- 2010 Ontario Plan (General Plan)
- DMA 2000 State & Local Plan Criteria: Mitigation Planning Workshop for Local Governments
- Getting Started: Building Support for Mitigation Planning (FEMA 386-1)
- Understanding Your Risks: Identifying Hazards and Estimating Losses (FEMA 386-2)
- Developing the Mitigation Plan: Identifying Mitigation Actions and Implementing Strategies (FEMA 386-3)
- Bringing the Plan to Life: Implementing the Hazard Mitigation Plan (FEMA 386-4)
- Using Benefit-Cost Review in Mitigation Planning (FEMA 386-5)
- Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning (FEMA 386-6)
- Integrating Manmade Hazards into Mitigation Planning (FEMA 386-7)
- Multi-Jurisdictional Mitigation Planning (FEMA 386-8)
- Using the Hazard Mitigation Plan to Prepare Successful Mitigation Projects (FEMA 386-9)
- Planning for A Sustainable Future: The Link Between Hazard Mitigation and Livability (FEMA 364)
- Rebuilding for A More Sustainable Future: An Operational Framework (FEMA 365)
- FEMA 322 Public Assistance Guide
- HMP Update Guidance
- HMP Plan Review Tool
- Hazus Local Database
- Stafford Act
- National Flood Insurance Act
- NOAA History of Significant Weather Events in Southern California
- City of Ontario Emergency Management Strategic Plan

Hazard mitigation planning is the process State, Tribal, and local governments use to identify risks and vulnerabilities associated with natural disasters, and to develop long-term strategies for protecting people and property from future hazard events.

1.2.2 Planning Team

The City of Ontario Emergency Management Working Committee (EMWC) served as the Hazard Mitigation Planning Team for the 2018 Update. Involving stakeholders is essential to building community-wide support for the plan. In addition to emergency managers, the planning process involves other government agencies (e.g., zoning, floodplain management, public works, community, and economic development), businesses, civic groups, environmental groups, and schools. The Planning Team was established to define and identify the strategies, goals, activities, and development of the HMP. The Planning Team represents a comprehensive team of subject matter experts from a variety of areas that could be affected by the planning effort or could provide great benefit to the team. Each Planning Team member is responsible for communicating the direction and status of the planning effort to their outside members and in return they are expected to bring to the team outside perspectives. The Planning Team will be led by the City Emergency Manager. The Emergency Manager, as the Chair of the EMWC and the Planning Team, will take on the responsibilities of a Project Manager and will facilitate and coordinate activities with other jurisdictions, and agencies.

1.2.3 Coordination with Other Jurisdictions, Agencies and Organizations

There are many jurisdictions, agencies, and organizations that are affected by or have influence on the City. As part of the planning process, the Planning Team took great efforts to engage and include as many members as possible. The City of Ontario Emergency Management Working Committee (EMWC), as an established group with a diverse membership, was an ideal platform for coordination efforts. The EMWC membership includes both internal and external emergency planning partners. In addition, the Emergency Manager works in coordination with many other groups. The EMWC networked with our businesses, faith-based agencies, school districts and the various utilities companies to gather input and information to produce this document.

1.2.4 Public Involvement/Outreach

Public involvement is critical to the success of the emergency management program for the City of Ontario. Representatives for the public are involved in the HMP, as well as other key facets of the emergency management program. Public involvement was solicited throughout the process. The City uses the “Whole Community” approach, which says that emergency management and emergency preparedness must involve the entire community, including residents, businesses and government, to be successful.

Since the 2005 HMP approval, the City has continued to educate the public on the hazards facing the city. At events, public opinion and comments are solicited. Public involvement for this update was primarily through the EMWC with the varied community representatives, and also included community events (such as Community Emergency Preparedness Fair and Fire Open House) and community presentations (such as Neighborhood Watch).

The City Council will review, approve and adopt the 2016 HMP. The City Council will issue a Resolution denoting approval of the HMP. Prior to the City Council approval, the HMP will be posted on the City website as part of the Agenda for the meeting. Any resident of the City may make comments or request information on the HMP during the regularly scheduled meeting. Only after the public has an opportunity to review and comment on the HMP will the Council take action on the agenda item.

1.2.5 Assess the Hazard

The EMWC facilitated discussions to identify hazards in the community. The EMWC started with the 2005 HMP. The first step was to validate the accuracy of the contents. The next step was to determine if any additional information or hazards should be included or removed. The EMWC used multiple sources for this information, using the subject matter expertise of the EMWC membership. This also assisted in determining hazard priorities in the community. In the 2005 HMP, a scoring system was used. This was now replaced in the 2011 HMP by a non-numerical system of high, medium and low rankings for probability and impact and is also used in the 2016 update. The hazards are placed in a matrix, which is used to determine planning and project priorities.

Probability

High: Highly Likely/Likely
Medium: Possible
Low: Unlikely

Impact

High: Catastrophic/Critical
Medium: Limited
Low: Negligible

The EMWC identified goals for the HMP update. The EMWC reviewed the hazard probability and impacts, evaluated the 2005 and 2011 Hazard Mitigation Plan Goals, then updated the goals for 2016. The EMWC also considered additions and deletions from the list of goals. The goals were reviewed to ensure consistency with various planning documents such as *The Ontario Plan*, State of California 2010 HMP, the SB County Operational Area HMP and other area jurisdictional HMP for consistency, compatibility and conflicts. The goals were then finalized.

1.2.6 Review and Propose Mitigation Measures

After the goals are set, mitigation measures are updated and developed. This includes a review of projects from the 2005and 2011 HMP. The mitigation measures also include goals and objectives from the City of Ontario *Emergency Management Strategic Plan,* After Action Reports, Corrective Action Plans and other operational documents. Once the mitigation measures are developed, they are then prioritized.

1.2.7 Draft the Hazard Mitigation Plan

The Hazard Mitigation Plan Update will be drafted by the Emergency Manager/OEM with input and comments from the EMWC and other participants. While the 2005 and 2011 HMP is used as a starting point, many revisions and changes were incorporated to improve the usability of the HMP while still maintaining consistency with the OA guidance.

Once the HMP update has been drafted and reviewed by the EMWC, it will be forwarded to Cal EMA and FEMA for approval. If Cal EMA or FEMA have any review comments, they will be incorporated as needed and the revised HMP will be again forwarded for approval.

1.2.8 Adopt the Plan

After CalOES and FEMA have approved the plan, the HMP update will be adopted by the City of Ontario City Council. The item will be part of the consent calendar subject to a public hearing if necessary. The HMP will be listed on the agenda with the plan being made available electronically to the general public prior to the meeting date. Any member of the public can make comments on the HMP during the meeting.

1.3 Purpose of the Plan

The intent of hazard mitigation is to reduce and/or eliminate loss of life and property. Hazard mitigation is defined by FEMA as "*any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards*." A "hazard" is defined by FEMA as "*any event or condition with the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural loss, environmental damage, business interruption, or other loss*."

The purpose of the Hazard Mitigation Plan (HMP) is to demonstrate the plan for reducing and/or eliminating risk in the City of Ontario, California. The HMP process encourages communities to develop goals and projects that will reduce risk and build a more disaster resilient community by analyzing potential hazards.

After disasters, repairs and reconstruction are often completed in such a way as to simply restore to pre- disaster conditions. Such efforts expedite a return to normalcy; however, the restoring of things to pre- disaster conditions sometimes result in feeding the disaster cycle; damage, reconstruction, and repeated damage. Mitigation is one of the primary phases of emergency management specifically dedicated to breaking the cycle of damage. Hazard mitigation is distinguished from other disaster management functions by measures that make City of Ontario development and the natural environment safer and more disaster resilient. Mitigation generally involves alteration of physical environments, significantly reducing risks and vulnerability to hazards by altering the built environment so that life and property losses can be avoided or reduced.

Mitigation also makes it easier and less expensive to respond to and recover from disasters.

Also with an approved (and adopted) HMP, the City of Ontario can be eligible for federal disaster mitigation funds/grants (Hazard Mitigation Grant Program, Pre-Disaster Mitigation, and Flood Management Assistance) aimed to reduce and/or eliminate risk. There are many jurisdictions, agencies, and organizations that are affected by or have influence on the City. As part of the planning process, the Planning Team took great efforts to engage and include as many members as possible. The City of Ontario Emergency Management Working Committee (EMWC), as an established group with a diverse membership, was an ideal platform for coordination efforts. The EMWC membership includes both internal and external emergency planning partners. In addition, the Emergency Manager works in coordination with many other groups.

1.4 Authority

In 2000, FEMA adopted revisions to the Code of Federal Regulations. This revision is known as "Disaster Mitigation Act (DMA)." DMA 2000, Section 322 (a-d) requires that local governments, as a condition of receiving federal disaster mitigation funds, have a Hazard Mitigation Plan (HMP) that describes the process for assessing hazards, risks and vulnerabilities, identifying and prioritizing mitigation actions, and engaging/soliciting input from the community (public), key stakeholders, and adjacent jurisdictions/agencies.

Senate Bill No. 379 will, upon the next revision of a local hazard mitigation plan on or after January 1, 2017, or, if the local jurisdiction has not adopted a local hazard mitigation plan, beginning on or before January 1, 2022, require the safety element to be reviewed and updated as necessary to address climate adaptation and resiliency strategies applicable to that city or county.

1.5 What's New

1.5.1 Plan Update and Progress:

Since the adoption of the HMP in 2011 the City of Ontario has been very busy in working on the various mitigation projects that it could put in to place. Still recovering from the Great Recession the City focused on projects that could be funded and completed.

Table 1-1 is a list of specific projects that were listed in the 2011 HMP in section 6.5. The status of these projects are identified in the far right column in red.

Table 1-1: Status of 2011 HMP Projects

Action	Lead	Funding Source	Timeframe	Priority	2016 Status
Ensure all new development and redevelopment is sited and constructed in accordance with the Ontario Plan and zoning.	Development	Local	Long	C	**Ongoing**
Implement specific projects	Redevelopment Development, OMUC, OEM, IT, other	Local, grant	Long	C	**Deferred due to budget reductions**
Conduct a risk assessment of the City's water treatment plant and City reservoirs	OMUC	Local	Short	C	**Completed**
Conduct a city wide assessment of City employee earthquake preparedness	OEM	Local	Short	C	**Ongoing**
Establish a nonstructural hazard evaluation and risk reduction program for city buildings and departments housing critical functions	OMUC	Local	Short	C	**Ongoing**
Improve damage assessment process and procedures	OEM, OMUC, CPS	Local	Short	C	**Ongoing**
Improve the building and infrastructure inventory for HAZUS	OMUC	Local, Grant	Short	C	**Ongoing**
Develop the primary Emergency Operations Center	Development	Local, Grant	Short	C	**Completed**
Conduct an assessment of City facility seismic hardening	OMUC	Local	Long	H	**Ongoing**
Perform assessment of city parks for mass care locations	OMUC, OEM	Local	Short	H	**Project taken over by the American Red Cross**
Update Disaster Council	OEM	Local	Short	H	**Completed**
Continue comprehensive emergency training for all city personnel	OEM	Local	Long	H	**Ongoing**

Action	Lead	Funding Source	Timeframe	Priority	2016 Status
Continue comprehensive emergency exercises for all city personnel	OEM	Local	Long	H	**Ongoing**
Evaluate City facility warning systems to determine efficacy in reaching all people within the building	IT	Local	Short	H	**Completed**
Assess City facility evacuation/shelter in place procedures	OEM	Local	Short	H	**Ongoing**
Update the mass notification system	IT	Local, Grant	Long	H	**Complete**
Create emergency management website	IT	Local	Short	H	**Complete**
Continue to sponsor annual Community Emergency Preparedness Fair	OEM	Local, Grant	Long	H	**Ongoing**
Enhance Emergency Management Working Committee membership	OEM	Local	Long	M	**Complete**
Improve emergency management public education material distribution	OEM	Local	Long	M	**Ongoing**

1.5.2 Lead agency listing

Development: Development Agency
OMUC: Ontario Municipal Utilities Company
OEM: Office of Emergency Management
IT: Information Technology Department

Only two projects were not worked on by the City of Ontario. The Implementation of Specific Projects was dropped because the lead agency was the Redevelopment Department which was eliminated by the State of California and the funding was put on hold while the State determined where the funds were going to be dispersed and the Assessment of Parks for Mass Care was taken by the Red Cross as a part of their upgraded disaster response capabilities.

1.5.3 Analysis and Methodology

An implementation strategy is the key to any successful planning effort. The implementation strategy identifies who has lead responsibility for the action, the estimated timeframe for completion, and potential funding source(s) to support implementation, and the priority ranking, defined as follows:

Lead Agency: City Agency/Department/Unit assigned lead responsibility
Timeframe: Short-term (less than 2 years); long-term (more than 2 years)
Funding source: Potential internal and external funding source(s)
Priority Ranking: Critical, High, Moderate or Low

NOTE: the order of listing in the following table is not necessarily the order of priority.

Looking toward the future the City of Ontario in this updated HMP will continue on the path toward mitigation reduction by taking on the new projects listed in Table 1-2.

Table 1-2: New Projects

Action	Lead Agency	Funding Source	Timeframe	Priority
Drought Mitigation	OMUC	local\grant	Short	High
Develop Alternate EOC Sites	OES	local	Long	High
Develop and implement projects to strengthen the city water system and reservoirs	OMUC	local	Long	High
Implement tools to evaluate the efficiency of warning systems to reach people in city facilities and the use of social media to get the message out to the public.	OEM, IT	local	Long	High

OEM: Office of Emergency Management
IT: Information Technology Department
OMUC: Ontario Municipal Utilities Company

1.5.4 New policies and regulations:

The City also implemented the 2014 Community Climate Action plan to combat Climate Change and the City took part in the regional plan to combat greenhouse gases.

What's new in the 2016 HMP update:

In this update you will see the following improvements to the HMP over past plans

- Better maps
- More detailed information on maps
- Better Charts\Graphs
- More detail and updates on specific plan areas
- Easier for the public to understand the plan and methodology
- Climate Change information

1.6 Community Profile

1.6.1 Physical Setting

The City of Ontario is located in the Inland Empire in Western San Bernardino County, approximately 35 miles east of Los Angeles and 20 miles west of San Bernardino on a flat alluvial plain at the base of the San Gabriel Mountains. The City is bordered by the neighboring cities of Upland, Montclair, Chino, Rancho Cucamonga, and Fontana.

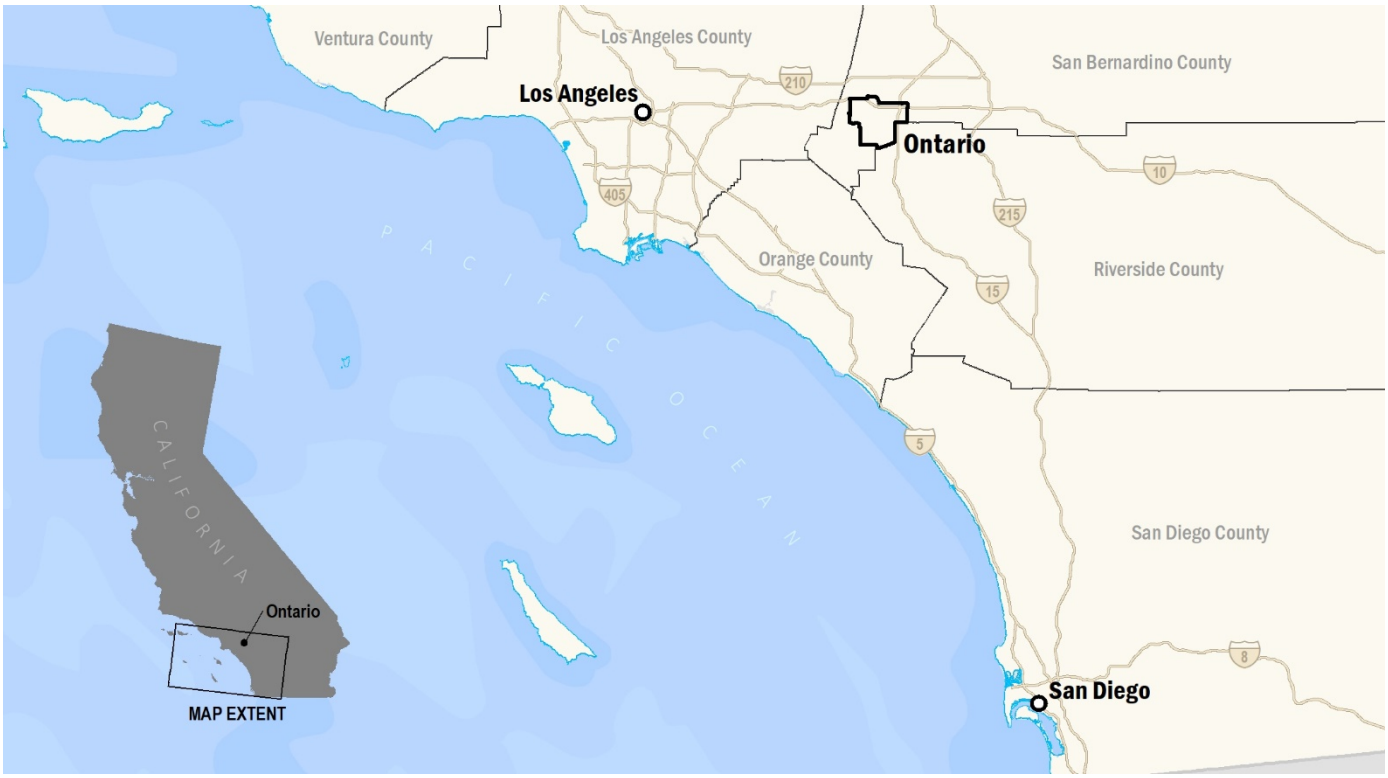

Figure 1-1: City of Ontario Location

1.6.2 Climate

- Mediterranean-like climate: moderate temperatures & low humidity year-round
- Average annual days of shine: 312
- Average median temperature: 83°F/24°C
- Average annual rainfall: 16.1 inches
- A few rainy days generally followed by many days of sunshine & clear skies

1.6.3 Major River/Watersheds

The City of Ontario is part of the Santa Ana River Watershed. A watershed is a region drained by a stream, lake, or other body of water. In other words, it is a bowl or basin-shaped area in which all water within the area (rain, snow, etc.) will flow to the same outlet point.

The Santa Ana River Watershed is located in southern California, south and east of the city of Los Angeles. The watershed includes much of Orange County, the northwestern corner of Riverside County, the southwestern corner of San Bernardino County, and a small portion of Los Angeles County. The EPA identifies the San Jacinto watershed as a separate watershed. For SAWPA (Santa Ana Watershed Project Authority) purposes, the San Jacinto watershed is considered to be part of the Santa Ana River watershed. The watershed is bounded on the south by the Santa Margarita watershed, on the east by the Salton Sea and Southern Mojave watersheds, and on the north/west by the Mojave and San Gabriel watersheds. The watershed is approximately 2,800 square miles in area.

1.6.4 Physiography

The watershed is located in the Peninsular Ranges and Transverse Ranges Geomorphic Provinces of Southern California (California Geological Survey Note 36). The highest elevations (upper reaches) of the watershed occur in the San Bernardino (San Gorgonio Peak -- 11,485 feet in elevation) and eastern San Gabriel Mountains (Transverse Ranges Province; Mt. Baldy -- 10,080 feet in elevation) and in the San Jacinto Mountains (Peninsular Ranges Province, Mt. San Jacinto – 10,804 ft). Further downstream, the Santa Ana Mountains and the Chino Hills form a topographic high before the river flows into the Coastal Plain (in Orange County) and into the Pacific Ocean. Primary slope direction is northeast to southwest, with secondary slopes controlled by local topography.

1.6.5 Geology

As is true for much of California, the geology of the Santa Ana River watershed is defined and created by seismic activity. The dominant structural feature is the San Andreas Fault zone, which trends in a southeast-northwest direction at the base of the San Bernardino Mountains; motion along this fault has caused the uplift of the San Bernardino and San Gabriel mountain ranges. Additional major fault structures include the San Jacinto fault zone and the Elsinore Fault Zone; the San Jacinto Mountains are caused by motion from both the San Andreas and San Jacinto zones. Fault zones/lines are shown in red on the figure below. The area between the San Jacinto zone and the Elsinore Zones is a down-dropped block, which is partly in-filled with sediments from the surrounding mountains.

There are too many geologic units in the watershed to describe separately, but the predominant features are intrusive rocks of the southern California batholiths (granitic and andesitic rocks) which have been uplifted/eroded to form the mountain ranges (shown in green shades in Figure 1-2), alluvial/fluvial sediments (materials eroded from the mountains and deposited in the basins, shown in tan/light tones), and semi-consolidated sedimentary units (maroon/brown color)

1.6.6 History

It was in the first week of August, 1881 when George Chaffey, a Canadian engineer, viewed the wastes known as the Cucamonga Desert and decided that this patch of land, if properly watered, could become productive and profitable. George and his brother William bought the "San Antonio lands," 6,218 acres with water rights for $60,000. This was the nucleus of their new model colony. They subsequently expanded to the Southern Pacific Railroad tracks on the south. On the north, they took in the Kincaid Ranch at San Antonio Canyon, an all-important source of water.

The Ontario Colony lands were quickly surveyed and went on sale in November, 1882. The centerpiece was Euclid Avenue, eight miles long and two hundred feet wide, the twin "driveways" separated by a parkway which was seeded in grass and lined with pepper trees. George named Euclid Avenue after the great Greek mathematician whose book Elements of Geometry had been a favorite subject for George in school. The primary requirement, which had to be met before the land could be utilized, was that water had to be found and brought to the town. Chaffey laid miles of cement pipe for this purpose and later the San Antonio Water Co. drove a tunnel into the head of the canyon to tap the underground flow—then an innovation in the field. The need for electric power to lift water from deep wells led to the establishment of the Ontario Power Co.

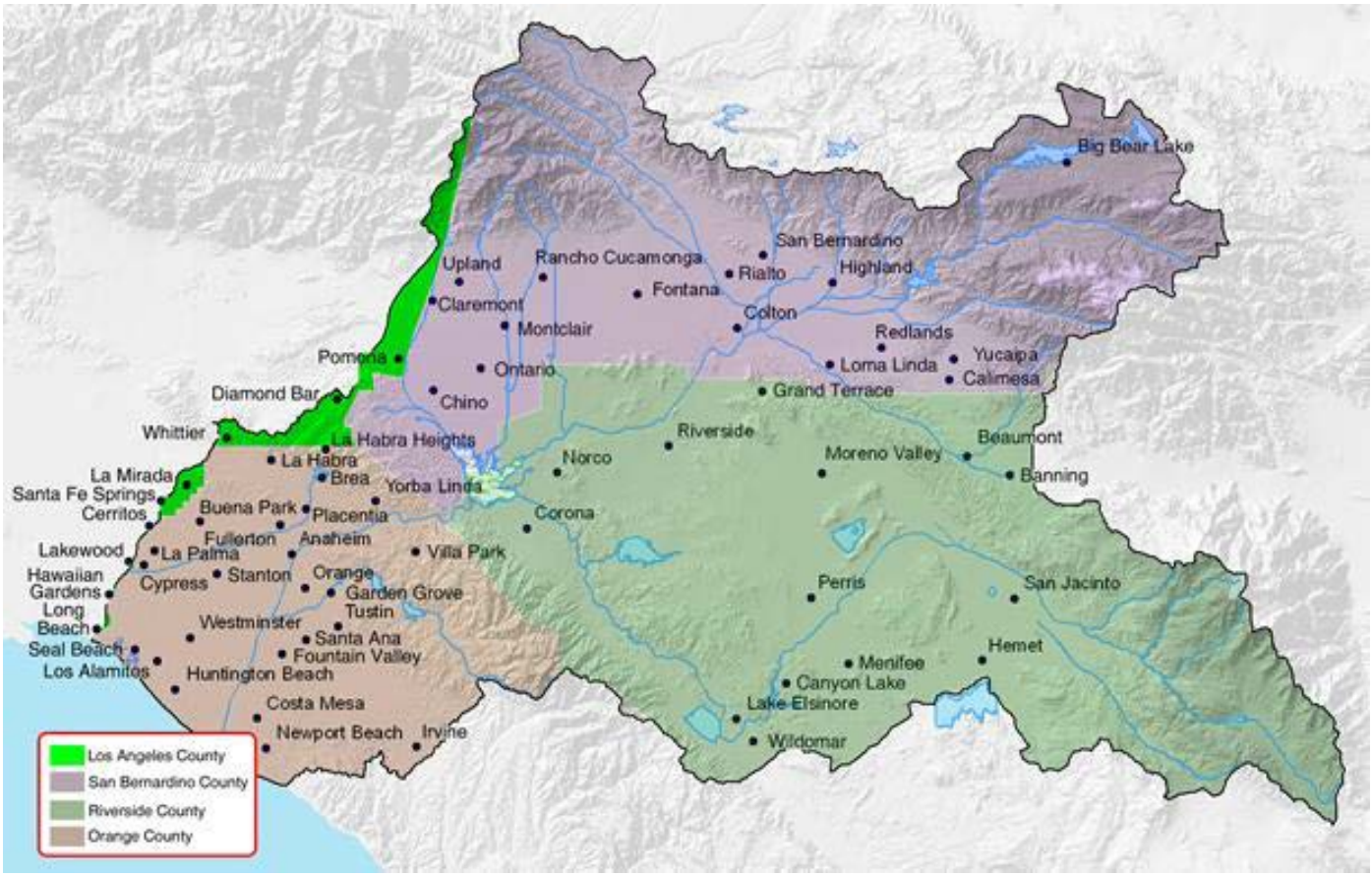

Figure 1-2: Geologic Units in the areas surrounding the City of Ontario

Another innovation in the settlement of Ontario was the provision, whereby, purchasers of land automatically received shares in the water company. This would ensure purchasers that a share of water proportional to their acreage would be piped to their land. This eliminated many problems that faced settlers elsewhere, where land rights and water rights were kept separate.

Charles Frankish became the guiding force during Ontario's early years. No matter what the activity he undertook, Frankish always threw himself into his work and was determined to do the best possible job.

In 1887, Ontario's unique "gravity mule car" made its first run on Euclid Avenue. Charles Frankish and Godfrey Stamm established the Ontario and San Antonio Heights R.R. Co. Engineer John Tays of Upland added the pull-out trailer that allowed the mules to coast downhill after each laborious pull from Holt to Twenty–Fourth Street. The mule car served until 1895, when it was replaced by an electric streetcar and returned temporarily when a flood damaged the electrical generator in the powerhouse.

Figure 1-3: City of Ontario

On Dec 10th, 1891, Ontario was incorporated as a city of the sixth class under the California Constitution. It adopted a City Council-City Manager form of government. The mayor was at first called the "President of the chosen by the Council, or the Board of Trustees as it was then called, from among their number. Subsequently, the law was changed to allow the people to elect the mayor directly.

Ontario first developed as an agricultural community, largely but not exclusively devoted to citrus. A few of the lovely Victorian "grove houses" still survive, relics of the days when growers could pretend that they were living the graceful lives of the old Spanish dons—until it came time for harvest.

Chaffey College, which was located where the Chaffey brothers put it until 1960, originally emphasized agricultural subjects to give the growers a hand. It was there that Prof. George Weldon developed the Babcock peach, an adaptation to California's mild winters. The college has moved to Rancho Cucamonga now, but Chaffey High School is still on what was originally a joint campus.

A reminder of the heyday of the orange groves, the Sunkist plant remains to this day. Even though the groves have gone from the West End, Ontario is still close to the "ton-mile center" of the industry. In addition to oranges, the production of peaches, walnuts, lemons and grapes was also important to the growth of Ontario and the adjoining city of Upland.

In 1923, Judge Archie Mitchell, Waldo Waterman, and some other airplane enthusiasts established Latimer Field. From that time on, the town became increasingly aviation conscious. Urban growth pushed the fliers progressively east, until they took up their present location, the Ontario International Airport. During World War II, this was a busy training center for pilots of the hot Lockheed P-38 "Lightning" twin-boom fighter.

Since World War II, Ontario has become a much more diversified community with an approximate population of 170,373. The city has expanded from the 0.38 square mile area incorporated back in 1891, up to almost 51 square miles. The economy now reflects an industrial and manufacturing base. Ten thousand acres are zoned for industrial use. With three major railroads, the San Bernardino, Pomona, and Devore Freeways (I-10, SR 60, and I-15), and the Ontario International Airport, Ontario is well provided with major transportation resources. Its proximity to Los Angeles ensures that Ontario will continue to grow in the years ahead. (City of Ontario web site)

1.6.7 Climate

The mean temperature of 70-83 degrees and the average rainfall of 16.1" continues to attract more residents to the City.

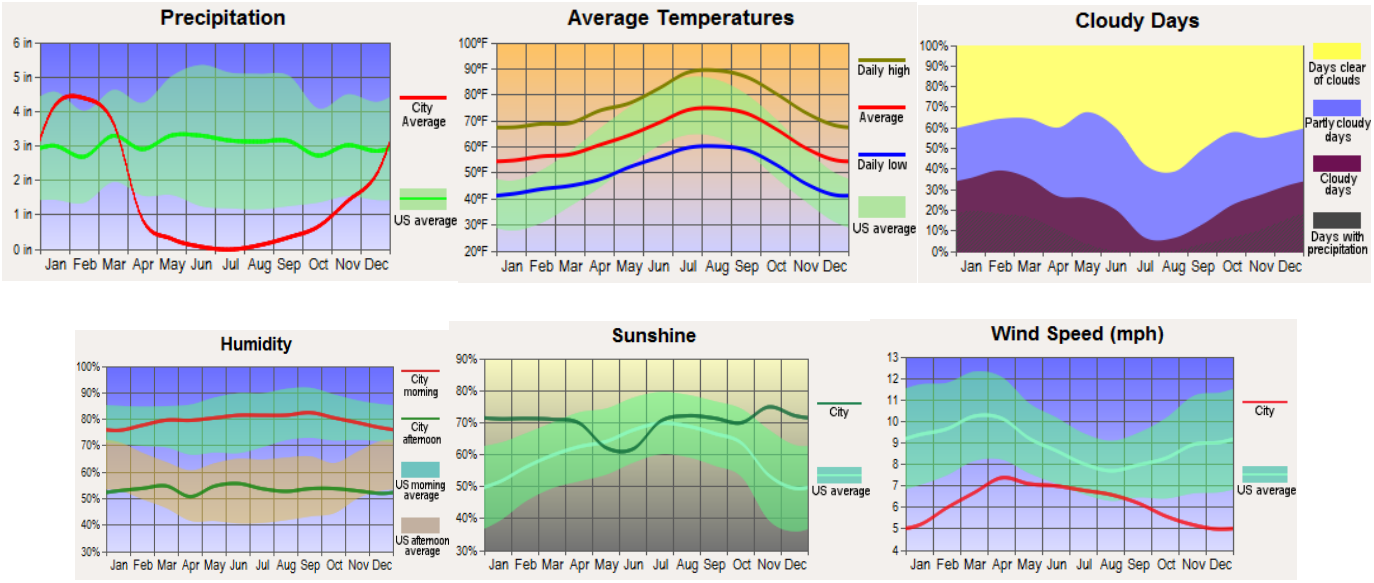

Figure 1-4: Climate Data for the City of Ontario
Source: www.city-data.com

1.6.8 Census

Table 1-3 displays the demographics of Ontario California. The data comes from the U.S. Census Department

Table 1-3: Demographics of the City of Ontario

Description	Measure	Source
Population		
Census 2010 Total Population	163,924	2010 Demographic Profile
2015 Population Estimate (as of July 1, 2015)	171,214	2015 Population Estimates
2014 ACS 5-Year Population Estimate	166,892	2010-2014 American Community Survey 5-Year Estimates
Median Age	31.2	2010-2014 American Community Survey 5-Year Estimates
Number of Companies	14,177	2012 Survey of Business Owners
Educational Attainment: Percent high school graduate or higher	69.7%	2010-2014 American Community Survey 5-Year Estimates
Count of Governments	N/A	2012 Census of Governments
Total housing units	49,093	2010-2014 American Community Survey 5-Year Estimates
Median Household Income	54,156	2010-2014 American Community Survey 5-Year Estimates
Foreign Born Population	50,367	2010-2014 American Community Survey 5-Year Estimates
Individuals below poverty level	18.3%	2010-2014 American Community Survey 5-Year Estimates
Race and Hispanic Origin		
White alone	95,020	2010-2014 American Community Survey 5-Year Estimates
Black or African American alone	10,386	2010-2014 American Community Survey 5-Year Estimates
American Indian and Alaska Native alone	1,353	2010-2014 American Community Survey 5-Year Estimates
Asian alone	8,455	2010-2014 American Community Survey 5-Year Estimates
Native Hawaiian and Other Pacific Islander alone	323	2010-2014 American Community Survey 5-Year Estimates
Some Other Race alone	44,975	2010-2014 American Community Survey 5-Year Estimates
Two or More Races	6,380	2010-2014 American Community Survey 5-Year Estimates
Hispanic or Latino (of any race)	117,151	2010-2014 American Community Survey 5-Year Estimates

Description	Measure	Source
White alone, Not Hispanic or Latino	28,646	2010-2014 American Community Survey 5-Year Estimates
Veterans	4,777	Community Survey 5-Year Estimates

1.6.9 Existing Land Use

The City of Ontario uses the Ontario Plan (a hybrid General Plan) which was adopted by City Council in 2010 as the road map for present and future development. Existing and future land use is highlighted in Figure 1-5. Zones and Specific Plans can be seen on the maps with details of those projects listed in 1.5.6 Development Trends.

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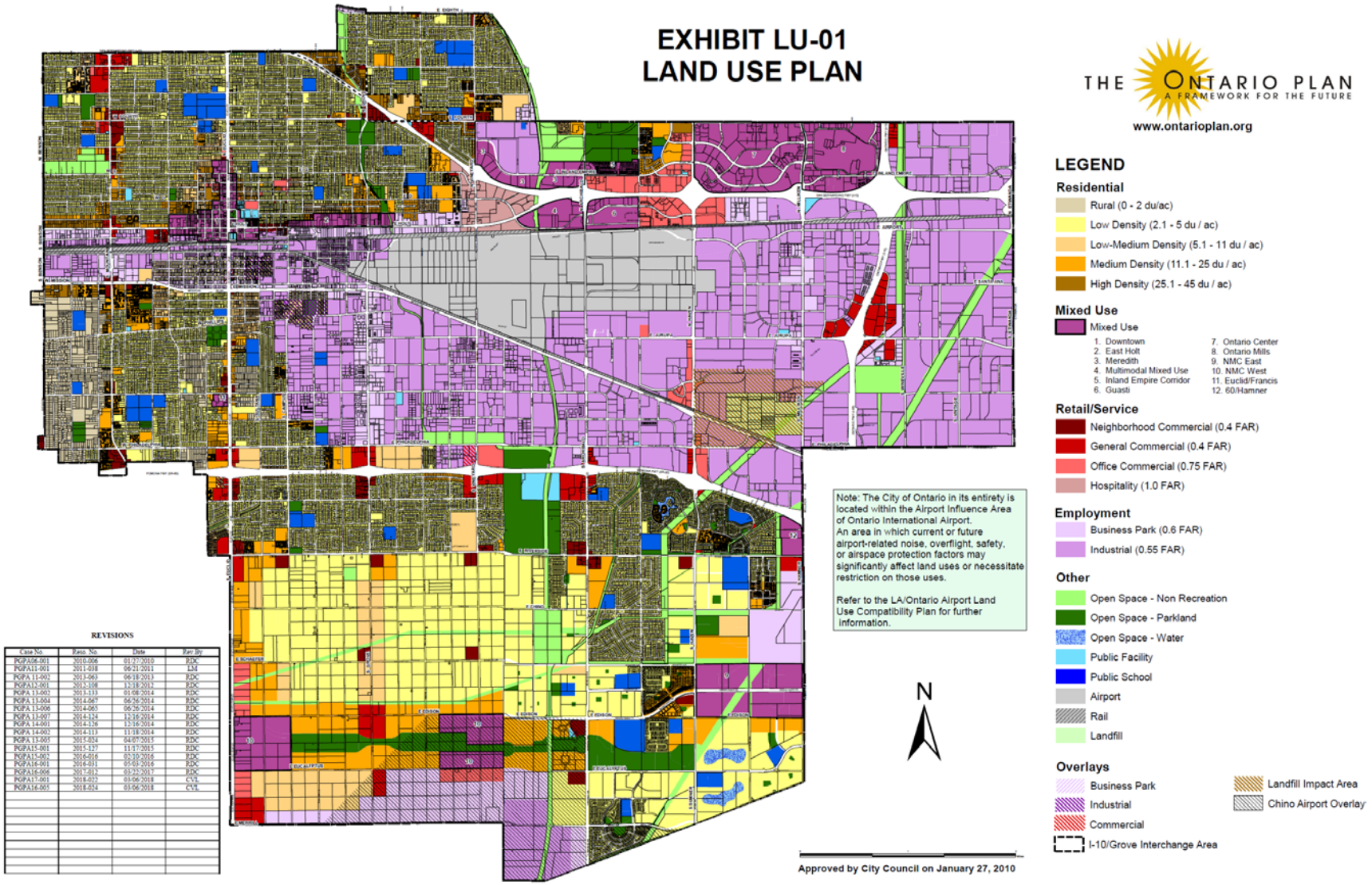

Figure 1-5: City of Ontario Land Use Map

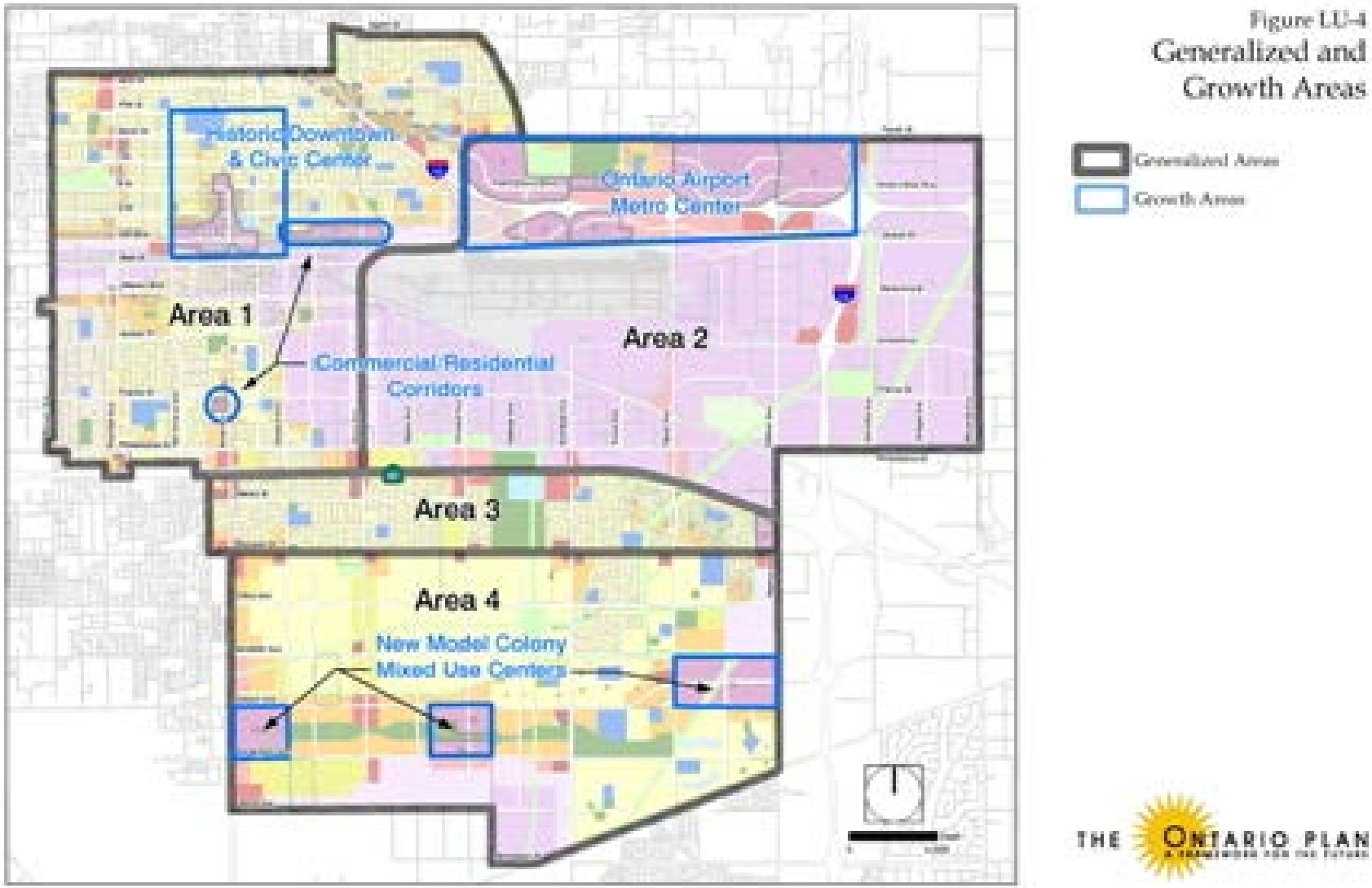

Figure 1-6: City of Ontario Generalized and Growth Areas

1.6.9.1 Generalized Areas

The Generalized Areas describe the fundamental pattern of land use in a generalized form. The purpose of Figure 1-6 is to provide an understanding of the basic land use structure and not to determine the specific land use on individual properties. The Generalized Land Plan consists of broad land use groupings, including residential, mixed-use, retail/service, employment, open space, public, and airport. Each of these generalized categories is subdivided into more detailed land use designations on the General Plan Land Use Map.

1.6.9.1.1 Area 1 – West of Grove Avenue

The area generally west of Grove Avenue. This area is the older residential area of the City and includes the historic downtown and civic center area. It is characterized by smaller lots and a relatively large number of homes and other historic structures that are approaching or older than 30 years.

1.6.9.1.2 Area 2 – Airport and East of Grove Avenue

The Airport and areas generally east of Grove Avenue and north of SR-60. The defining land use feature in the City is the Ontario International Airport. The physical location of the airport determines the circulation patterns and optimum land uses in its immediate vicinity. The hospitality area along Vineyard Avenue; the Convention Center; and industrial, warehousing and distribution areas can be tied directly to the presence of the Airport. The land uses in this area are generally retail, office, industrial, warehousing, and service-related and were developed primarily during the last three decades. Wide streets, landscaped corridors, screened/ bermed parking areas, large lots, and large master-planned commercial and industrial developments characterize this area.

1.6.9.1.3 Area 3 – South of SR-60 and North of Riverside Drive

The area south of SR-60 and north of Riverside Drive. This area is separated from the City by SR-60 and is characterized by large, traditional single-family and master-planned residential communities with corner service-commercial uses.

1.6.9.1.4 Area 4 – South of Riverside Drive

The area generally south of Riverside Drive. This area comprises the New Model Colony area and is largely agricultural with scattered residences and agriculture-related businesses.

1.6.9.2 Growth Areas

The Policy Areas delineate districts of the City where detailed policy guidance is tailored to address unique issues within each area. The corresponding strategies that have been tailored to address the specific needs and issues of each area are contained in the Land Use Designation Summary Table. The following are the defined Policy Areas: Historic Downtown and Civic Center: This is the historic heart of Ontario and is a unique blend of historic, social and cultural uses set in a compact street grid. It includes our Civic Center, Library, diverse residential neighborhoods, and retail opportunities along Euclid Avenue, Holt Boulevard and B Street.

1.6.9.2.1 Commercial and Residential Corridors

East Holt Blvd.: These older commercial corridors are envisioned as areas that transition to new residential uses. They are intended to provide new housing opportunities that will also provide increased demand for retail in more concentrated, strategic locations (e.g., at major intersections)

SEC Euclid and Francis: The Euclid-Francis Mixed Use Area is envisioned as a low-rise (3-5 stories), mixture of retail and residential uses that will create identity and place along the Euclid corridor and serve the surrounding residents.

Ontario Airport Metro Center: This area is envisioned as the most intensive concentration of development in the Inland Empire and includes the Convention Center and hospitality area along Vineyard Avenue; Ontario Mills; Guasti Village, the Events Center, and major office and urban residential centers. The area benefits from major transportation facilities including the I-10 and I-15 freeways, ONT, and a variety of transit options.

1.6.9.2.2 New Model Colony

NMC West: These are the mixed use centers of the New Model Colony and are characterized by a combination of retail, office, and residential uses in a walkable environment.

NMC East: These are the mixed use centers of the New Model Colony and are characterized by a combination of retail, office, and residential uses in a walkable environment.

Table 1-4: Land Use Designations Summary Table

Land use Designations	Residential Density & Non-Residential Intensity	Intention
Residential - A wide range of housing densities and products to meet the demand of current and future residents with varying lifestyles. In addition to the residential uses described below, other uses such as schools, parks, childcare facilities, utilities, live-work units, and other public/institutional uses that are determined to be compatible with, oriented towards the needs of residential neighborhoods they serve, and those that help enhance community may also be allowed. For developments that encompass multiple properties and contain more than one land use designation, the maximum number of units permitted for the development may be spread over the entire site thereby allowing the blending of the residential densities. When calculating the number of units permitted, the existing parcel size, before required dedication, shall be used.		
Rural	>0–2.0 dwelling units per acre	Single-family detached residences, typically in an estate setting.
Low Density	>2.0–5.0 dwelling units per acre	Single-family detached residences.
Low-Medium Density	>5.0-11.0 dwelling units per acre	Single/multi-family attached and detached residences, including small lot subdivisions, townhouses, and courtyard homes
Medium Density	>11.0-25.0 dwelling units per acre	Single/multi-family attached and detached residences including townhouses, stacked flats, courtyard homes, stacked flats, and small lot single-family subdivisions
High Density	>25.0-45.0 dwelling units per acre	Multi-family dwellings including stacked flats and mid-rise and high-rise residential complexes.

Land use Designations	Residential Density & Non-Residential Intensity	Intention
Retail/Service - A full spectrum of retail, service, professional, office, medical, tourist-related, and entertainment uses at a range of intensities to respond to market demand and the character of the surrounding environment. In addition to the retail/service uses described below, other uses such as parks, childcare facilities, live-work units, utilities, and other public/institutional uses that are determined to be compatible with, oriented towards the needs of the surrounding neighborhood, and those that help enhance community may also be allowed.		
Neighborhood Commercial	0.40 FAR	Local serving retail, personal service, office, and dining uses, typically located within a predominantly residential neighborhood.
General Commercial	0.40 FAR	Local and regional serving retail, personal service, entertainment, dining, office, tourist-serving, and related commercial uses
Office/ Commercial	0.75 FAR	An intense mixture of regional serving retail, service, tourist-serving, professional office, entertainment, dining, and supporting services uses that capitalize on strategic locations in Ontario. This designation also includes professional offices including financial, legal, insurance, medical, and other similar uses in a neighborhood setting and/or as adaptive reuse
Hospitality	1.00 FAR	Regional serving tourist-serving, retail, entertainment, and service uses such as convention centers, hotels/motels, and restaurants
Employment – An array of employment uses, such as manufacturing, distribution, research and development, and office, at a range of intensities to meet the demand of current and future market conditions. In addition to the employment uses described below, other uses such as parks, live-work units, utilities, and other public/institutional uses that are determined to be compatible with and oriented towards the surrounding community uses may also be allowed.		
Business Park	0.60 FAR	Employee-intensive office uses including corporate offices, technology centers, research and development, “clean” industry, light manufacturing, and supporting retail.
Industrial	0.55 FAR	Variety of light industrial uses, including warehousing/distribution, assembly, light manufacturing, research and development, storage, repair facilities, and supporting retail and professional office uses. This designation also accommodates activities that could potentially generate impacts, such as noise, dust, and other nuisances. If office uses and/or multiple tenant uses are developed on parcels fronting on the Milliken, Haven, and Archibald corridors, an FAR of 0.60 may be used.

Land use Designations	Residential Density & Non-Residential Intensity	Intention
Other		
Open Space– Non-Recreation	Not applicable	Open space that includes utility easements, and drainage channels. We desire to realize multiple uses from these open spaces, such as trails, greenways, joint-use recreational amenities, landscaped parkways/medians, parking lots, and nurseries.

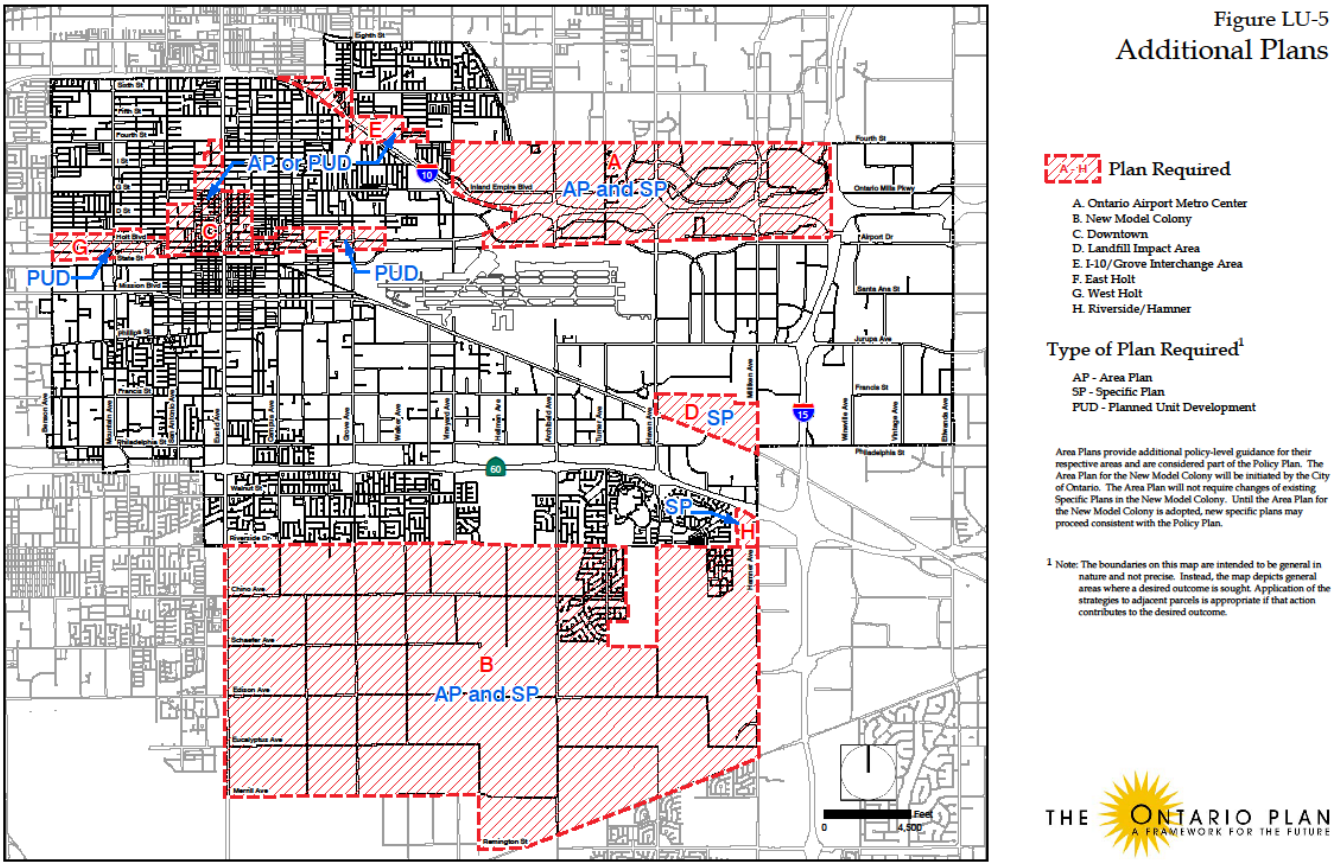

Figure 1-7: Additional Plans

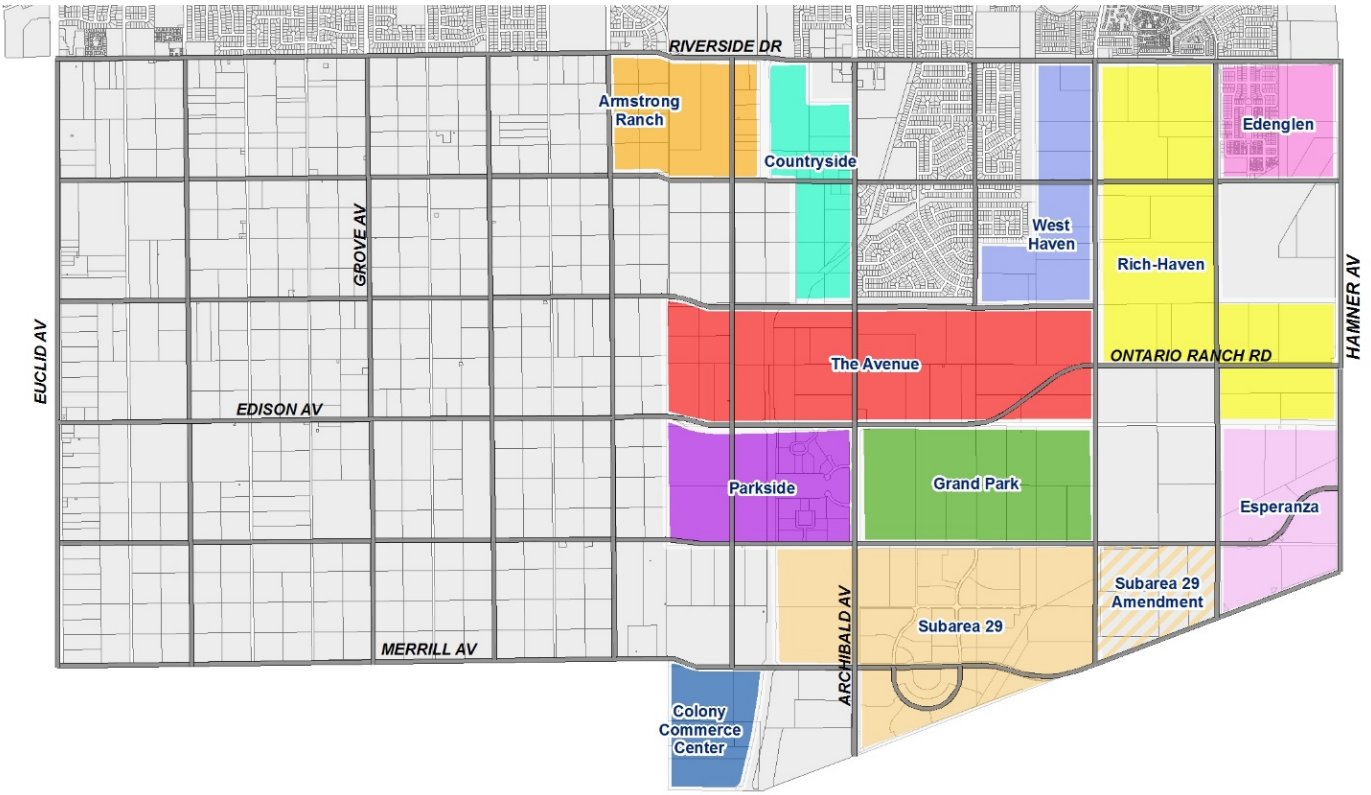

Figure 1-8: City of Ontario Subareas

1.6.9.2.3 Ontario Airport Expansion and Development

In 2016 the airport changed ownership from the City of Los Angeles to the City of Ontario. The Ontario International Airport Authority (OIAA) is in the process of developing a new master plan for the Ontario International Airport. This master plan will help guide the development of the airport through the year 2030.

ONT is well situated to serve the future aviation needs of the Inland Empire and the southern California region for both cargo and passengers. Demand for air transportation will be created by the Inland Empire's rapid population growth as well as its growth as a manufacturing and distribution center. Furthermore, with limited potential for future expansion of LAX and other regional airports beyond their current capacities, ONT can be expected to play a vital role in fulfilling the future aviation needs of the Southern California region. The master plan study will determine how much of that growth ONT can accommodate while still minimizing the impacts to the local community.

1.6.9.3 Retail Development

Resident customer base within a 10 mile radius: more than 1 million people 2013 total taxable sales: $6.7 billion **Per capita taxable sales:** $42,539 (largest of the region's cities of over 100,000 residents) Office Properties Proposed/Under Development

Ontario has approximately 5 million square feet of Class A Office space proposed, under development or under construction. Ontario expects to realize 5 to 10 million square feet of new office space in the next 20 years to meet the growing demand for professional and technical firms in the Inland Empire.

1.6.9.4 Residential Development

The City of Ontario currently has approved plans for over 80 residential developments, more than 35 commercial developments and greater than 600 industrial development projects. These projects are approved by the city Planning Department and detailed information is available at City Hall in the form of "Building Activity Reports". These reports are updated quarterly and outline the progress of each project.

1.6.9.4.1 Ontario Ranch Residential Development

The 8,200 acre/13-square mile, Ontario Ranch (formerly New Model Colony) is planned as an upscale residential development where homes are in close proximity to parks, pathways, retail centers, health facilities and schools. It is bounded by Riverside Drive to the north, Milliken Avenue/Hamner Avenue to the east, the Riverside County line and Merrill Avenue to the south, and Euclid Avenue to the west. With forethought in providing broadband communications, a "common fiber optic telecommunications network" is planned to be included as part of the supporting infrastructure. This fiber optic network will create an electronic "community" within Ontario Ranch and provide homes with advanced video, data and phone services. Ontario Ranch is expected to add, at buildout, roughly 165,000 residents, 47,000 homes and several thousand businesses to Ontario. Ultimately, Ontario Ranch provides Ontario the opportunity to define its future with new, upscale neighborhoods, possibly making Ontario the county's largest city.

1.6.10 Development Trends

The following is a list of present and future developments since the last Hazard Mitigation Plan was approved in 2011. These are taken directly from the Ontario Plan approved by City Council in May 2012. The Ontario Plan (a hybrid General Plan) is the road map for development in the city since 2010 and revised in 2012. The Ontario Plan uses the HMP as part of the process to review projects in the city.

1.6.10.1 Residential

A wide range of housing densities and products to meet the demand of current and future residents with varying lifestyles. In addition to the residential uses described below, other uses such as schools, parks, childcare facilities, utilities, live-work units, and other public/institutional uses that are determined to be compatible with, oriented towards the needs of residential neighborhoods they serve, and those that help enhance community may also be allowed. For developments that encompass multiple properties and contain more than one land use designation, the maximum number of units permitted for the development may be spread over the entire site thereby allowing the blending of the residential densities. When calculating the number of units permitted, the existing parcel size, before required dedication, shall be used.

1.6.10.2 Rural

- >0–2.0 dwelling units per acre
- Single-family detached residences, typically in an estate setting.

1.6.10.2.1 Low Density

- >2.0–5.0 dwelling units per acre
- Single-family detached residences.

1.6.10.2.2 Low-Medium Density

- >5.0-11.0 dwelling units per acre
- Single/multi-family attached and detached residences, including small lot subdivisions, townhouses, and courtyard homes.

1.6.10.2.3 Medium Density

- >11.0-25.0 dwelling units per acre
- Single/multi-family attached and detached residences including townhouses, stacked flats, courtyard homes, stacked flats, and small lot single-family subdivisions.

1.6.10.2.4 High Density

- >25.0-45.0 dwelling units per acre
- Multi-family dwellings including stacked flats and mid-rise and high-rise residential complexes.

1.6.10.3 Retail/Service

A full spectrum of retail, service, professional, office, medical, tourist-related, and entertainment uses at a range of intensities to respond to market demand and the character of the surrounding environment. In addition to the retail/service uses described below, other uses such as parks, childcare facilities, live-work units, utilities, and other public/institutional uses that are determined to be compatible with, oriented towards the needs of the surrounding neighborhood, and those that help enhance community may also be allowed.

1.6.10.3.1 Neighborhood Commercial

- 0.40 FAR
- Local serving retail, personal service, office, and dining uses, typically located within a predominantly residential neighborhood.

1.6.10.3.2 General Commercial

- 0.40 FAR
- Local and regional serving retail, personal service, entertainment, dining, office, tourist-serving, and related commercial uses.

1.6.10.3.3 Office/Commercial

- 0.75 FAR
- An intense mixture of regional serving retail, service, tourist-serving, professional office, entertainment, dining, and supporting services uses that capitalize on strategic locations in Ontario. This designation also includes professional offices including financial, legal, insurance, medical, and other similar uses in a neighborhood setting and/or as adaptive reuse

1.6.10.3.4 Hospitality

- FAR
- Regional serving tourist-serving, retail, entertainment, and service uses such as convention centers, hotels/motels, and restaurants.

1.6.10.4 Employment

An array of employment uses, such as manufacturing, distribution, research and development, and office, at a range of intensities to meet the demand of current and future market conditions. In addition to the employment uses described below, other uses such as parks, live-work units, utilities, and other public/institutional uses that are determined to be compatible with and oriented towards the surrounding community uses may also be allowed.

1.6.10.4.1 Business Park

- 0.60 FAR
- Employee-intensive office uses including corporate offices, technology centers, research and development, "clean" industry, light manufacturing, and supporting retail.

1.6.10.4.2 Industrial

- 0.55 FAR
- Variety of light industrial uses, including warehousing/distribution, assembly, light manufacturing, research and development, storage, repair facilities, and supporting retail and professional office uses. This designation also accommodates activities that could potentially generate impacts, such as noise, dust, and other nuisances.
- If office uses and/or multiple tenant uses are developed on parcels fronting on the Milliken, Haven, and Archibald corridors, an FAR of 0.60 may be used.

1.6.10.5 Other

1.6.10.5.1 Open Space–Non-Recreation

- Not applicable
- Open space that includes utility easements, and drainage channels. We desire to realize multiple uses from these open spaces, such as trails, greenways, joint-use recreational amenities, landscaped parkways/medians, parking lots, and nurseries.

1.6.10.5.2 Open Space–Parkland

- Not applicable
- Recreational facilities, such as tot-lots, parks, golf courses, and sports complexes and joint-use facilities with schools, utilities, and drainage facilities.

1.6.10.5.3 Open Space–Water

- Not applicable
- Existing or planned water amenities that can accommodate recreational uses such as boating and fishing.

1.6.10.5.4 Public Facility

- Not applicable
- Public facilities including civic centers, governmental institutions, police and fire stations, transportation facilities, museums, and public libraries.

1.6.10.5.5 Public School

- Not applicable
- Public schools (K-12) and universities.

1.6.10.5.6 Airport

- Not applicable
- Airport, including terminals, parking, service commercial, distribution, hangers, repair, and warehousing.

1.6.10.5.7 Landfill

- Not applicable
- Restricts use to the use, operation, and reclamation of the Milliken Landfill. If the site is reclaimed, the City will consider a host of uses including a transit station and multi-modal transfer station.

1.6.10.5.8 Railroad

- Not applicable
- Railroad rights-of-way, stations, and facilities.

1.6.10.6 Mixed Use

An intense mixture of uses that, when concentrated, create focal points for community activity and identity and facilitate the use of transit. The Mixed Use land use category accommodates a horizontal and/or vertical mixture of retail, service, office, restaurant, entertainment, cultural, and residential uses.

- Development in the Mixed Use land use designation requires approval of a master plan, such as an area plan, specific plan, or planned unit development, which focuses on the character, relationship of uses, public/private access, parking, pedestrian facilities, building form, integration with the roadways and pedestrian ways, public spaces, landscaping, and public amenities.
- Density, intensity and intended character varies by area, as generally described below.
- The densities and intensities of the mixed use designation represent the intended level of anticipated development; however, individual projects may vary depending upon an approved master plan, such as an area plan, specific plan, or planned unit development.
- The maximum amount of development in each Mixed Use area shall be limited by the Future Build out Projections. Further direction regarding land use distributions, densities and intensities within each area are provided by Area Plans and/or specific plans as noted below.

1.6.10.6.1 Downtown Mixed Use Area

- >25.0 to 75.0 dwelling units per acre
- 2.0 FAR for retail and office uses

Envisioned as an intensive vertical and horizontal mixture of retail, office, and residential uses in a pedestrian friendly atmosphere. The historic character is enhanced. The most intensive uses are envisioned along Euclid and Holt Avenues. See the Downtown Area Plan for more detail.

1.6.10.6.2 East Holt Mixed Use Area

- >14.0 to 40.0 dwelling units per acre
- 2.0 FAR for office uses
- 1.0 FAR for retail uses

This area is envisioned as a low-rise (3-5 stories) intensification of the Holt Corridor. The intent is to create identity and place along the Holt Corridor and connect the Downtown and the Ontario Airport Metro Center. See the East Holt Boulevard Area Plan for more detail.

1.6.10.6.3 Meredith Mixed Use Area

- >14.0 to 125.0 dwelling units per acre
- 3.0 FAR for office and retail uses
- Subject to Area Plan for Ontario Airport Metro Center

Meredith is envisioned as one of the most intensive developments in Ontario and is intended to accommodate an intensive, horizontal and vertical mixture of commercial, office, and residential uses based around a transit station. The portion fronting I-10 will be the most intensive mixture of mid-rise buildings, regional-serving retail and office centers, while the northern area is generally a residential village comprised of single and multi-family residential districts surrounding a vertically mixed-use village core. There is an approved Specific Plan on this site that may require amendment to reflect the Ontario Airport Metro Center Area Plan. See Ontario Airport Metro Center Area Plan for more detail.

1.6.10.6.4 Multimodal Mixed Use Area

- >20.0 to 80.0 dwelling units per acre
- 1.0 FAR for office and retail uses
- Subject to Area Plan for Ontario Airport Metro Center

The Multimodal Mixed Use Area is the ideal location of our future multi-modal transit station that links rail, regional, local, and Airport transit. Intensive office, retail, and residential uses are envisioned to be integrated with the transit station, which should be an iconic structure befitting a key entry into the US and Ontario. See the Ontario Airport Metro Center Area Plan for more detail.

1.6.10.6.5 Inland Empire Corridor Mixed Use Area

- >14.0 to 30.0 dwelling units per acre
- 2.0 FAR for office uses
- 1.0 FAR for retail uses
- Subject to Area Plan for Ontario Airport Metro Center

Located along Inland Empire Boulevard, this area is intended to provide a connection between Meredith and the Ontario Center and relate to the park immediately to the north. This area is envisioned as a lower-rise mixture of office, retail, and residential uses. There is an approved Specific Plan on this site that may require amendment to reflect the Ontario Airport Metro Center Area Plan. See the Ontario Airport Metro Center Area Plan for more detail.

1.6.10.6.6 Guasti Mixed Use Area

- >25.0 to 65.0 dwelling units per acre
- 1.0 FAR for office and retail uses
- Subject to Area Plan for Ontario Airport Metro Center

This site includes the Guasti Winery, which is on the National Register of Historic Places. This area is envisioned as a mixture of high quality office, lodging, retail and residential uses that incorporate the Guasti Winery. More intensive office and commercial uses are envisioned along I-10 while office, commercial, and lodging uses are envisioned in and around the historic structures. There is an approved Specific Plan on this site that may require amendment to reflect the Ontario Airport Metro Center Area Plan. See the Ontario Airport Metro Center Area Plan for more detail.

1.6.10.6.7 Ontario Center Mixed Use Area

- >20.0 to 125.0 dwelling units per acre
- 2.0 FAR for office uses
- 1.0 FAR for retail uses
- Subject to Area Plan for Ontario Airport Metro Center

This area is one of the most intensive developments in Ontario and is characterized by low-rise (3-5 stories) and mid-rise (5-10 stories), mixed-use buildings, iconic architecture, and regionally significant uses, such as the Events Center, and other cultural and entertainment uses. This area accommodates a vertical and horizontal mixture of entertainment, retail, office, and residential uses in an active, pedestrian oriented atmosphere. In this area, The Haven Corridor is envisioned as an elegant, landscaped boulevard lined multi-story office uses near the I-10 and mixed and residential uses closer to Rancho Cucamonga. There is an approved Specific Plan on this site that may require amendment to reflect the Ontario Airport Metro Center Area Plan. See the Ontario Airport Metro Center Area Plan for more detail.

1.6.10.6.8 Ontario Mills Mixed Use Area

- >25.0 to 85.0 dwelling units per acre
- 1.5 FAR for office uses
- 1.0 FAR for retail uses
- Subject to Area Plan for Ontario Airport Metro Center

This area will continue to be our regional retail center. We envision intensification of the area to include additional retail and entertainment, office, lodging, and potentially residential uses. New development is envisioned to occur along the interior loop road and the perimeter of the area. There is an approved Specific Plan on this site that may require amendment to reflect the Ontario Airport Metro Center Area Plan. See the Ontario Airport Metro Center Area Plan for more detail.

1.6.10.6.9 NMC East Mixed Use Area

- >14.0 to 50.0 dwelling units per acre
- 0.7 FAR for office and retail uses
- Subject to approved Specific Plans

The New Model Colony East Mixed Use Area is within the Rich-Haven and Ontario Esperanza Specific Plans. This area is envisioned as a low-rise (3-5 stories), primarily horizontal mixture of retail, office, medical, and residential uses. The greatest level of intensity is envisioned along Edison and Milliken Avenues. See the New Model Colony Area Plan for more detail.

1.6.10.6.10 NMC West Mixed Use Area

- >14.0 to 65.0 dwelling units per acre
- 1.5 FAR for office uses
- 1.0 FAR for retail uses
- Subject to Specific Plan

The New Model Colony West Mixed Use Areas are envisioned as the southern activity centers of Ontario and the focus of the New Model Colony. These areas accommodate a vertical and horizontal mixture of commercial, office, entertainment, and residential uses in a pedestrian oriented atmosphere. It is envisioned that the major roads through these Mixed Use areas are couplets, which are a series of one-way streets that disperse traffic and allow reduced street widths, maximize the sense of community, and emphasize pedestrian accessibility. These Mixed Use areas are envisioned as low-rise (3-5 stories) with some mid-rise (5-10 stories) near the intersection of Euclid and Edison. See the New Model Colony Area Plan for more detail.

1.6.10.6.11 Hamner/SR-60 Mixed Use Area

- 20.0 – 30.0 dwelling units per acre
- 1.0 FAR for retail and office uses
- Subject to Specific Plan

The Hamner/SR-60 Mixed Use Area is envisioned as a mixture of residential, retail and office uses that will create identity and place along the SR-60 corridor.

1.6.10.6.12 Euclid/Francis Mixed Use Area

- >14.0 to 25.0 dwelling units per acre
- 1.0 FAR for retail uses
- Subject to Specific Plan or other implementing mechanism

The Euclid-Francis Mixed Use Area is envisioned as a low-rise (3-5 stories), mixture of retail and residential uses that will create identity and place along the Euclid corridor and serve the surrounding residents.

Overlays - An overlay is intended to reflect a particular characteristic of an area and is applied “over” an underlying land use designation to provide guidance above and beyond the underlying land use designation.

1.6.10.7 Business Park Transitional Areas

Per the underlying designation unless a non-residential use is developed in which case the density and use requirements of the Business Park land use designations shall apply.

This area is within existing and future noise and safety impact zones of LA/Ontario International Airport. This overlay allows residential uses to transition to a Business Park land use if an entire block can be recycled to a Business Park use and the block is contiguous to another non-residential block. In these cases, the City shall be responsible for the necessary amendments to the Policy Plan Map and Development Code.

1.6.10.8 Industrial Transitional Areas

Per the underlying designation unless a non-residential use is developed in which case the density and use requirements of the Industrial land use designations shall apply.

This area is within existing and future noise and safety impact zones of LA/Ontario International Airport. This overlay allows residential uses to transition to an industrial land use if an entire block can be recycled to an Industrial use and the block is contiguous to another non-residential block. In these cases, the City shall be responsible for the necessary amendments to the Policy Plan Map and Development Code.

1.6.10.9 Commercial Transitional Areas

Per the underlying designation unless a commercial use is developed in which case the density and use requirements of the General Commercial land use designations shall apply.

The City seeks viable commercial sites. This overlay allows residential uses to transition to a commercial land use if the project abuts an existing/approved commercial use and if the transition does not result in “remnant” parcels of residential uses. In these cases, the City shall be responsible for the necessary amendments to the Policy Plan Map and Development Code.

1.6.10.10 ONT Airport Influence Area

- Varies

An area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restriction on those uses. Refer to the Airport Land Use Compatibility Plan for LA/Ontario International Airport Adopted April 2011.

1.6.10.11 Chino Airport Overlay

- Varies

An area within which area plans and specific plans, which are required prior to development in the New Model Colony, will be required to be coordinated with the airport authority for the Chino Airport to determine appropriate land uses, maximum population density, maximum site coverage, height restrictions, and required notification/disclosure areas based upon the noise contours and runway protection, approach, and Part 77 zones of the adopted Chino Airport Master Plan.

This overlay is intended as an interim solution and upon adoption of a Chino Airport Land Use Compatibility Plan (ALUCP) that is based on the adopted Airport Master Plan and accepted by Ontario, we will evaluate the continued need for this overlay.

1.6.10.12 Lake/Amenity

- NA

Denotes an area where a lake and/or amenity acceptable to the City are required as the focal point of future development. For build out purposes, the area of the lake/amenity is not assumed to generate any units.

1.6.10.13 SoCalf Preserve

- Per underlying designation

Denotes areas where SoCalf owns and operates agricultural preserves within the New Model Colony. Development to the underlying designations is desired if the preserves can be relocated

1.6.10.14 I-10–Grove Interchange Area

- Per underlying designation

This area will be impacted by the future I-10–Grove Avenue interchange, which may require future revisions to the Land Use Plan and Zoning Map. It is anticipated that the new interchange will result in new multi-family residential and commercial development opportunities that are created through lot consolidation and City and private reinvestment. These opportunities will result in safer, functional and aesthetically pleasing developments that provide needed housing and viable commercial choices while addressing the changes in property access anticipated with the I-10/Grove Avenue interchange redesign.

1.6.10.15 Plan Required Overlay

Denotes areas where master plans are required prior to development. The master plan can include an area plan, specific plan, or planned unit development. In some instances, the Plan Required Overlay includes adopted specific plans. See adopted specific plans in the City on the City's website. The adopted specific plans shall be reviewed for conformance with the master plan and, in some cases, it may be desirable to amend the approved specific plans to reflect the vision of this Policy Plan. See Additional Plan Map to determine where additional plans (Specific Plan or Area Plan are required).

1.6.10.15.1 Ontario Airport Metro Center

- Per approved area plan and individual specific plans

Envisioned as the most intensive area outside of downtown Los Angeles with a vertical and horizontal mixture of regional-serving retail, office, restaurant, entertainment, cultural, and residential uses in low to mid-rise buildings (3-10 stories). See the Ontario Airport Metro Center Area Plan or adopted specific plans for more detail.

1.6.10.15.2 New Model Colony

- Per approved area plan and individual specific plans

Envisioned as a mixture of residential neighborhoods focused around town centers, which feature low to mid rise buildings (3-10 stories) with a mixture of employment, retail, service, entertainment, cultural, and residential uses and local-serving village centers united through a network of greenways/trails, open spaces, amenities, and infrastructure and the "Great Park," a linear open space amenity containing active and passive recreational features, gardens, water features, and cultural facilities. See the New Model Colony Area Plan or adopted specific plans for more detail.

1.6.10.15.3 Downtown

- Per approved planned unit development and/or area plan

Envisioned as an intensive vertical and horizontal mixture of retail, office, and residential uses in a pedestrian friendly atmosphere. The historic character is enhanced. The most intensive uses are envisioned along Euclid and Holt Avenues. See the Downtown Area Plan for more detail.

1.6.10.15.4 I-10–Grove Interchange Area

- Per approved planned unit development and/or area plan

This area is will be impacted by the future I-10–Grove Avenue interchange, which may require future revisions to the Land Use Plan and Zoning Map. It is anticipated that the new interchange will result in new multi-family residential and commercial development opportunities that are created through lot consolidation and City and private reinvestment. These opportunities will result in safer, functional and aesthetically pleasing developments that provide needed housing and viable commercial choices while addressing the changes in property access anticipated with the I-10/Grove Avenue interchange redesign.

1.6.10.15.5 Landfill Impact Area

- Per approved area plan

Lands immediately surrounding the Milliken Landfill may be contaminated or have other landfill-related hazards that may limit allowable uses, as well as site design. Development in this area requires the submission of a detailed environmental analysis.

While all of these development trends may not be recognized over the next 5 years, all future development that will take place is planned to occur in accordance with the General Plan Land Use Zones and will consider all potential hazards identified within this plan. Additionally, all development will be in compliance with all Fire, Flood, and Seismic codes of the County and State at the time of development.

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Section 2. Plan Adoption

In December of 2014 the City of Ontario adopted the Community Climate Action Plan to combat Climate Change. The City also took part in the 2013 SANBAG EIR to inventory and reduce greenhouse gases and emissions. Both are attached to this document along with the Ontario Plan (General Plan)

2.1 Adoption by Local Governing Body

This Hazard Mitigation Plan was developed by the Emergency Management Working Committee and approved by the City of Ontario City Council.

2.2 Promulgation Authority

The Promulgator Authority for the adoption of the Hazard Mitigation Plan City of Ontario, California and for the Mayor and City Council and incorporation of the HMP into the City of Ontario California General Plan is:

Paul S. Leon	Mayor
Debra Dorst- Porada	Mayor pro Tem
Alan D. Wapner	Council Member
Jim Bowman	Council Member
Ruben Valencia	Council Member

2.3 Primary Point of Contact

The Point of Contact for information regarding this HMP is:

Raymond Cheung, *Emergency manager*
City of Ontario
415 East "B" St
Ontario, California 91764
909-395-2557

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Section 3. Planning Process

3.1 Preparing for the Plan

Multi-Jurisdictional Hazard Mitigation Planning is a process local governments use to identify risks and vulnerabilities associated with natural disasters, and to develop long-term strategies for protecting people and property from future hazard events.

Planning creates a way to solicit and consider input from diverse interests. Involving stakeholders is essential to building community-wide support for the plan. In addition to emergency managers, the planning process involves other government agencies (e.g., zoning, floodplain management, public works, community, and economic development), businesses, civic groups, environmental groups, and schools.

3.1.1 Planning Team

The City of Ontario Emergency Management Working Committee (EMWC) served as the Hazard Mitigation Planning Team for the 2018 update.

Table 3-1: Team Members

Department	First Name	Last Name
Administrative Services	Desiree	Gonzales
Administrative Services	Grant	Yee
Building	Kevin	Shear
Building	Pedro	Rico
Building	Eric	Carreon
Records Mgmt	Marilyn	Bonus
Records Mgmt	Anna	Fierro
Records Mgmt	Vicki	Kasad
City Manager	David	Sheasby
City Manager	Al	Boling
Code Enforcement	Joe	De Sousa
Code Enforcement	Robin	Lucero
Code Enforcement	Anthony	Vega
Code Enforcement	Dave	Bucholtz
Code Enforcement	Robert	Gluck
Community & Public Services	David	Coote
Community & Public Services	Mike	Mergener
Community & Public Services	Phillip	Marino
Community & Public Services	Mark	Chase
Economic Development	Charity	Hernandez
Economic Development	Nick	Gonzalez
Economic Development	Tanya	Spiegel
Economic Development	John	Andrews
Engineering	Mauricio	Diaz
Engineering	Jaime	Maciel-Carrera

Department	First Name	Last Name
Engineering	Antonio	Alejos
Engineering	Louis	Abi-younes
Fire Dept	Mike	Pelletier
Fire Dept	Tony	Coletta
Fire Dept	Brian	Acosta
Fire Dept	Rob	Elwell
Fiscal Services	Giancarlo	Mezza
Fiscal Services	Doreen	Nunes
Housing & Municipal Services	Craig	Grabow
Housing & Municipal Services	Michael	Johnson
Human Resources	Reed	Sigler
Human Resources	Angela	Lopez
Information Technology	Peter	Witherow
Information Technology	Pascal	Pangestu
Information Technology	Niloufar	Kaivan-Mehr
Information Technology	Robert	De Casas
Information Technology	Michael	Stanley
Information Technology	Anna	Vaca
Information Technology	Elliot	Ellsworth
Library	Nancy	Morales
Library	Kelly	Zackmann
Library	Alan	Saeger
Library	Helen	McAlary
Mgmt Services	Shanita	Simmons
Mgmt Services	Annie	Wu
Mgmt Services	Janny	Phan
Mgmt Services	Lilyan	Villarreal
Mgmt Services	Bob	Chandler
Museum	Michelle	Sifuentes
Museum	Leslie	Matamoros
Museum	Loretha	Nwosu
Museum	John	Worden
OMUC	Don	Meyer
OMUC	Joe	Minasso
OMUC	Andy	Marquez
OMUC	Scott	Burton
Planning	Scott	Murphy
Planning	Rudy	Zeledon
Planning	Lorena	Mejia
Police Dept	William	Russell
Police Dept	David	McBride
Police Dept	Michael	Lorenz
Police Dept	Lizceth	Zazueta
Police Dept	Elizabeth	Morris
Police Dept	Brad	Kaylor
Recreation	Julie	Dorey
Revenue	Delilah	Patterson

Department	First Name	Last Name
Revenue	Anita	Argueta
Revenue	Lucia	Cooney
Risk Management	Kathy	Garozzo

3.1.2 Meeting dates and agenda

April 13, 2017
City of Ontario Emergency Management Working Committee (EMWC)

March 08, 2017
Business Partners

March 01, 2017
Faith Based Partners

February 15, 2017
Community CERT meeting

February 16, 2017
City of Ontario Emergency Management Working Committee (EMWC)

January 21, 2017
City of Ontario Emergency Management Working Committee (EMWC)

December 08, 2016
City of Ontario Emergency Management Working Committee (EMWC)

November 10, 2016
City of Ontario Emergency Management Working Committee (EMWC)

Meeting Material may be found in Appendix A.

3.1.3 Coordination with Other External Jurisdictions, Agencies, and Organization

Involving stakeholders is essential to building community-wide support for the plan. In addition to emergency managers, the planning process involves other government agencies (e.g., zoning, floodplain management, public works, community, and economic development), businesses, civic groups, environmental groups, and schools. The Planning Team was established to define and identify the strategies, goals, activities, and development of the HMP. The Planning Team represents a comprehensive team of subject matter experts from a variety of areas that could be affected by the planning effort or could provide great benefit to the team. Each Planning Team member is responsible for communicating the direction and status of the planning effort to their outside members and in return they are expected to bring to the team outside perspectives. The Planning Team will be led by the City Emergency Manager. The Emergency Manager, as the Chair of the EMWC and the Planning Team, will take on the responsibilities of a Project Manager and will facilitate and coordinate activates.

3.2 Public Involvement/Outreach

3.2.1 Public Hearing Process

Public involvement is critical to the success of the emergency management program for the City of Ontario. Representatives for the public are involved in the HMP, as well as other key facets of the emergency management program. Public involvement was solicited throughout the process. The City uses the "Whole Community" approach, which says that emergency management and emergency preparedness must involve the entire community, including residents, businesses and government, to be successful.

Since the last HMP approval, the City has continued to educate the public on the hazards facing the city. At all events, public opinion and comments are solicited. Public involvement for this update was primarily through the EMWC with the varied community representatives, and also included community events (such as Community Emergency Preparedness Fair and Fire Open House) and community presentations (such as Neighborhood Watch).

The City Council will review, approve and adopt the HMP. The City Council will issue a Resolution denoting approval of the HMP. Prior to the City Council approval, the HMP will be posted on the City website as part of the Agenda for the meeting. Any resident of the City may make comments or request information on the HMP during the regularly scheduled meeting. Only after the public has an opportunity to review and comment on the HMP will the Council take action on the agenda item.

3.3 Assess the Hazard

The EMWC facilitated discussions to identify hazards in the community. The EMWC started with the 2005 HMP. The first step was to validate the accuracy of the contents. The next step was to determine if any additional information or hazards should be included or removed. The EMWC used multiple sources for this information, using the subject matter expertise of the EMWC membership. This also assisted in determining hazard priorities in the community. In the 2005 HMP, a scoring system was used. This is now replaced by a non-numerical system of high, medium and low rankings for probability and impact. The hazards are placed in a matrix, which is used to determine planning and project priorities. The list of hazards included some that were not applicable to Ontario or an extremely rare occurrence to determine the perceived risk to the community by the EMWC.

Probability
High: Highly Likely/Likely
Medium: Possible
Low: Unlikely

Impact
High: Catastrophic/Critical
Medium: Limited
Low: Negligible

Table 3-2: Hazard Assessment

event	28 surveys counted....not all questions were answered																	
	Geographic area				Overall significance				Probability of future evnts				Maximum probable event					
	negligible	limited	significant	extensive	low	medium	high		unlikely	occasional	likely	Highly likely	weak	moderate	severe	extreme		
Aircraft accident	11	15	2		14	14		Aircraft accident	1	10	11	6	4	9	10	4		
civil disturbance/ riot	7	15	6		18	8	1	civil disturbance/ riot	4	10	10	4	6	16	3	1		
communications failure	7	10	4	7	13	14	1	communications failure	2	6	12	8	7	19	2			
climate change	9	4	7	8	16	6	6	climate change	10	10	4	1	11	7	5	2		
cyber attack	5	5	7	7	15	8	4	cyber attack	5	5	9	8	5	14	9			
dam inundation	11	3	2	12	18	8		dam inundation	15	3	3	5	12	3	5	2		
drought	2	3		18	12	6	10	drought	5	3	6	14	6	8	9	5		
earth quake	3	7	2	17	8	8	12	earth quake	2	3	6	17	2	4	10	12		
epidemic \health emergency	7	12	8	1	19	7	2	epidemic \health emergency	5	6	7	3	3	9	8	6		
explosion	5	12	2	8	21	7		explosion	7	10	8	2	5	11	7	1		
extreme cold	9	5	3	12	19	8	1	extreme cold	10	5	3	2	14	4	2			
extreme heat	9	3	9	6	6	15	3	extreme heat	3	3	9	13	13	8	1			
fire	7	8	12	1	10	10	5	fire	2	2	8	9	5	13	9	1		
flooding	9	4	11	4	17	9		flooding	6	8	6	7	9	11	6	2		
hail	10	7	9	2	15	9		hail	7	6	10	5	16	7	2			
hazardous materials	13	8	3	1	13	15		hazardous materials	4	5	7	9	8	17	2			
high winds	10	5	3	9	14	8	5	high winds	2	3	8	12	7	13	2			
infestation	7	6	3	7	23	1	2	infestation	5	9	9	4	18	10				
lightning	8	8	1	3	17	7	4	lightning	9	8	3	1	15	13				
mass fatality incident	8	9	1	8	14	10	4	mass fatality incident	5	6	6	5	10	10	6	2		
nuclear	9	4	1	10	12	6	10	nuclear	13	10	4		5	6	4	12		
radiological	9	7	1	11	17	5	6	radiological	11	11		1	5	7	6	10		
severe storm	6	3	3	10	9	11	2	severe storm	5	7	5	1	5	12	6			
terrorism	8	7	2	5	8	12	1	terrorism	3	8	5	5	3	12	9	4		
tornado	12	7	4	3	14	11		tornado	20	4	1	2	9	11	7			
train accident	11	10	2		8	14	1	train accident		8	15	4	8	10	5			
transportation accident	6	8	3	3	13	11	3	transportation accident		5	14	8	6	14	3			
utility \power failure	5	6	4	6	11	13	4	utility \power failure		5	9	6	7	13	2	1		
wildfire	3	8	11	5	10	12	4	wildfire	2	8	10	8	6	14	6	2		
winter storm	11	1	5	8	21	7		winter storm	11	10	4	2	14	11	1			

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3.4 Set Goals

The EMWC identified goals for the HMP update. The EMWC reviewed the hazard probability and impacts, evaluated the latest Hazard Mitigation Plan Goals, then updated the goals for the current update. The EMWC also considered additions and deletions from the list of goals. The goals were reviewed to ensure consistency with various planning documents such as *The Ontario Plan*, Ontario Community Climate Plan, State of California HMP, the SB County Operational Area HMP and other area jurisdictional HMP for consistency, compatibility and conflicts. The goals were then finalized.

3.5 Review and Propose Mitigation Measures

After the goals are set, mitigation measures are updated and developed. This includes a review of projects from the latest HMP. The mitigation measures also include goals and objectives from the City of Ontario *Emergency Management Strategic Plan,* After Action Reports, Corrective Action Plans and other operational documents. Once the mitigation measures are developed, they are then prioritized.

3.6 Draft the Hazard Mitigation Plan

The Hazard Mitigation Plan Update will be drafted by the Emergency Manager/OEM with input and comments from the EMWC and other participants. The public will also have an opportunity for comments during the process. While the last HMP is used as a starting point, many revisions and changes were incorporated to improve the usability of the HMP while still maintaining consistency with the OA guidance.

Once the HMP update has been drafted and reviewed by the EMWC, it will be forwarded to Cal OES and FEMA for approval. If Cal EMA or FEMA have any review comments, they will be incorporated as needed and the revised HMP will be again forwarded for approval.

3.7 Adopt the Plan

After Cal-OES and FEMA have approved the plan, the HMP update will be adopted by the City of Ontario City Council. The item will be part of the consent calendar subject to a public hearing if necessary. The HMP will be listed on the agenda with the plan being made available electronically to the general public prior to the meeting date. Any member of the public can make comments on the HMP during the meeting. The HMP will be included in the Safety Element of the Ontario Plan update (General Plan) and will be integrated into future capital and comprehensive improvement projects and planning.

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Section 4. Risk Assessment

The risk assessment is the process of measuring the potential impact to life, property and economic impacts resulting from natural hazards. The intent of the Risk Assessment is to identify, as much as practicable given existing/available data, the qualitative and quantitative vulnerabilities of a community. The results of the risk assessment allow for a better understanding of the impacts of natural hazards to the community and provides a foundation in which to develop and prioritize mitigation actions to reduce damage from natural disasters through increased preparedness and response times and the better allocation of resources to areas of greatest vulnerability.

This Risk Assessment Section evaluates the potential loss from a hazard event by assessing the vulnerability of buildings, infrastructure, and people. It identifies the characteristics and potential consequences of hazards, how much of the unincorporated areas of the County could be affected by a hazard, and the impact on unincorporated County area assets. The Risk Assessment approach consists of three (3) components:

- Hazard Identification – Identification and screening of hazards (Section 4.1)
- Hazard Profiles – Review of historic occurrences and assessment of the potential for future events (Section 4.2)
- Vulnerability Assessment – Determination of potential losses or impacts to buildings, infrastructure and population (Section 4.3)

4.1 Hazard Identification

4.1.1 Hazard Screening Criteria

The first step in this process was to identify which natural hazards exist in the City. To assist with this identification, an extensive data collection and document review effort was conducted. Identifying new or emerging hazards, obtaining updated hazard maps, hazard probability research studies and reports, reviewing data from new or updated local plans and obtaining information about emergencies or disasters that have occurred since the 2011 HMP provided valuable insights into which parts of the risk assessment, and the overall HMP, required updates.

The hazards that were identified are:

- Earthquake
- Flood
- High Wind
- Wildfire
- Water Shortage
- Extreme Heat Severe Storm
- Hazardous Materials
- Fire (Residential, Commercial, Industrial)
- Extreme Cold
- Dam Inundation
- Infestation
- Lightning
- Hail
- Tornado
- Pandemic
- Radiological
- Nuclear
- Explosion
- Transportation
- Communications Failure
- Civil Disturbance
- Cyber Attack
- Terrorism

The initial assessment of each hazard is based upon the following sources:

- Historic occurrence of the hazard: Assessment is based on frequency, magnitude and potential impact of the hazard.
- Mitigation potential for the hazard: This criteria considers if there are mitigation or counter measures possible to prevent or alleviate the risk. For example, although Ontario International Airport (ONT) is located within the City of Ontario and there are significant concerns over an airplane crash, an airplane crash is not the sort of hazard for which mitigation plans have proved successful.
- Expert opinion: Evaluation of threats includes a literature review and the expertise of the project team.
- Published data and information: Assessment is based on data and/or information from credible publications or websites; for example U.S. Geological Survey, California Geological Survey, National Weather Services, or academic publications.

Table 4-1: Document Review Crosswalk

Hazards	2010 San Bernardino County Multijurisdictional Hazard Mitigation Plan Update	County of San Bernardino 2007 General Plan Safety Element	Ontario 2005 and 2011 HMP And General Plan Safety Element	2013 CA State Hazard Mitigation Plan
Climate Change				■
Dam Inundation	■		■	■
Drought	■		■	■
Earthquake/ Geologic Hazards	■	■	■	■
Extreme Heat	■			■
Extreme Cold	■			■
Flood	■	■	■	■
Hazardous Waste	■	■		■
High Winds/ Straight Line Winds	■	■	■	
Hail	■			
Infestation	■			
Lightning	■			
Terrorism				■
Tornado	■			
Volcanic Activity		■		■
Wildfire	■	■	■	■
Winter Storm (Heavy Snowfall)	■			■

In addition to a document review, previous hazard occurrences were used to identify hazards for this hazard mitigation plan. Previous hazard occurrences provide a historical view of hazards that have affected the Ontario in the past, and thus provide a window into the potential hazards that can affect the Ontario in the future. Information about federal and state disaster declarations in San Bernardino County (declarations are declared by County) was compiled from FEMA and Cal EMA's databases, as shown in Table 4-2. Though not a complete snapshot of hazard incidences in the County (since not all hazard events are federally or state declared), Table 4-2 provided the Ontario EMWC with solidified accounts of the types

and extent of disasters that have affected the County dating back to 1965 when flooding affected entire regions of San Bernardino County. As indicated in Table 4-2 large regional incidents have affected San Bernardino County, including the California Wildfires of 1999. Most recently, disasters for terrorist attacks (2015), flood (2011) and severe storms (2010) were declared in San Bernardino County. The disaster declarations in Table 4-2, provide a baseline for consideration in the hazard prioritization process.

Table 4-2: Federal and State Declared Disasters

Disaster Number	Declaration Date	Disaster Type	Incident Type	Title
Federal Declarations				
Major Disaster Declarations				
1952	1/26/2011	DR	Flood	Severe Winter Storms, Flooding, and Debris and Mud Flows
1884	3/8/2010	DR	Severe Storm(s)	Severe Winter Storms, Flooding, and Debris and Mud Flows
1731	10/24/2007	DR	Fire	Wildfires, Flooding, Mud Flows, and Debris Flows
1689	3/13/2007	DR	Freezing	Severe Freeze
1585	4/14/2005	DR	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mud and Debris Flows
1577	2/4/2005	DR	Severe Storm(s)	Severe Storms, Flooding, Debris Flows, and Mudslides
1498	10/27/2003	DR	Fire	Wildfires, Flooding, Mudflow and Debris Flow Directly Related T
1203	2/9/1998	DR	Severe Storm(s)	Severe Winter Storms and Flooding
1046	3/12/1995	DR	Severe Storm(s)	Severe Winter Storms, Flooding Landslides, Mud Flow
1044	1/10/1995	DR	Severe Storm(s)	Severe Winter Storms, Flooding, Landslides, Mud Flows
1005	10/28/1993	DR	Fire	Fires, Mud/Landslides, Flooding, Soil Erosion
635	11/27/1980	DR	Fire	Brush & Timber Fires
615	2/21/1980	DR	Flood	Severe Storms, Mudslides & Flooding
145	2/25/1963	DR	Flood	California Severe Storms, Heavy Rains, & Flooding
47	12/23/1955	DR	Flood	California Flood
15	2/5/1954	DR	Flood	California Flood & Erosion
Fire Management Assistance Declarations				
5147	8/16/2016	FM	Fire	Blue Cut Fire
5144	8/7/2016	FM	Fire	Pilot Fire
5089	7/17/2015	FM	Fire	North Fire/ Pine Fire

Disaster Number	Declaration Date	Disaster Type	Incident Type	Title
2955	9/2/2011	FM	Fire	Hill Fire
2841	10/4/2009	FM	Fire	Sheep Fire
2836	9/1/2009	FM	Fire	Pendleton Fire
2833	8/31/2009	FM	Fire	Oak Glen Fire
2792	11/15/2008	FM	Fire	Freeway Fire Complex
3279	10/23/2007	EM	Fire	Wildfires
2738	10/22/2007	FM	Fire	Grass Valley Fire
2728	9/15/2007	FM	Fire	Butler 2 Fire
2653	7/12/2006	FM	Fire	Sawtooth Fire Complex
3248	9/13/2005	EM	Hurricane	Hurricane Katrina Evacuation
2503	10/25/2003	FM	Fire	Old Fire
2501	10/23/2003	FM	Fire	Ca-Grand Prix Fire-10-23-2003
2497	9/6/2003	FM	Fire	Ca-Bridge Fire-09-05-2003
2491	8/19/2003	FM	Fire	Ca-Locust Wildfire-08-19-2003
2464	9/24/2002	FM	Fire	Williams Canyon Fire (Mt. Baldy)
2433	6/17/2002	FM	Fire	Louisiana Fire (Cajon Pass)
2425	6/17/2002	FM	Fire	California Blue Cut Fire (Cajon Pass/ Oak Hills)
Emergency Declarations				
3279	10/23/2007	EM	Fire	Wildfires
3248	9/13/2005	EM	Hurricane	Hurricane Katrina Evacuation
3140	9/1/1999	EM	Fire	Ca-Wildfires-08/25/1999
CAL OES/ State Emergency And Disaster Proclamations/ Executive Orders				
Other Disasters				
2464	9/24/2002	FS	Fire	Williams Fire
2433	6/27/2002	FS	Fire	Louisiana Fire

Disaster Number	Declaration Date	Disaster Type	Incident Type	Title
State Declarations				
5147	8/16/2016	FM	Fire	Blue Cut Fire
CDAA	12/18/2015	CDAA	Terrorist Attack	Waterman Incident Mass Shooting
None	8/5/2014	None	Severe Storm(s)	August Severe Weather - Dir. Concurrence
None	1/17/2014	None	Drought	California Drought
None	12/1/2011	None	Winds	December High Wind Event – Rancho Cucamonga
1952	1/21/2011	DR	Flood	Severe Winter Storms, Flooding, and Debris and Mud Flows
None	11/20/2010	None	Water	Golden State Water Company (GSWC) Contamination
1884	3/8/2010	DR	Severe Storm(s)	Severe Winter Storms, Flooding, and Debris and Mud Flows
2841	10/4/2009	FM	Fire	Sheep Fire
2836	9/1/2009	FM	Fire	Pendleton Fire
2833	8/31/2009	FM	Fire	Oak Glen Fire
2792	11/17/2008	FM	Fire	Freeway Fire Complex - (Ex. Ord. S-15-08 11/18/08)
None	10/15/2008	None	Fire	October Fire events (Foxborough, San Antonio, San Bernardino)
None	10/15/2008	None	Winds	San Bernardino Wind Event - (Ex. Ord. S-11-08 10/16/08)
1731	10/24/2007	DR	Fire	Wildfires, Flooding, Mud Flows, and Debris Flows
3279	10/23/2007	EM	Fire	Wildfires
2738	10/22/2007	FM	Fire	Grass Valley Fire
2728	9/15/2007	FM	Fire	Butler 2 Fire
None	7/27/2007	None	Severe Storm(s)	Severe Weather/Flooding (City of Needles)- Dir. Concurrence
1689	3/13/2007	DR	Freezing	Severe Freeze

Disaster Number	Declaration Date	Disaster Type	Incident Type	Title
2653	7/12/2006	FM	Fire	Sawtooth Fire Complex
3248	9/13/2005	EM	Hurricane	Hurricane Katrina Evacuation
1585	4/14/2005	DR	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mud and Debris Flows
1577	2/4/2005	DR	Severe Storm(s)	Severe Storms, Flooding, Debris Flows, and Mudslides
2503	10/25/2003	FM	Fire	Old Fire
2501	10/23/2003	FM	Fire	Ca-Grand Prix Fire-10-23-2003
CDAA 2003-02	8/22/2003	CDAA	Flood	Summer Floods (Yucca Valley/Lower Desert)
None	3/7/2003	None	Fire Danger	Bark Beetle Infestation (San Bernardino Mountains)
None	1/17/2001	None	Energy	Statewide Energy Emergency
3140	9/1/1999	EM	Fire	Ca-Wildfires-08/25/1999
1203	2/9/1998	DR	Severe Storm(s)	Severe Winter Storms and Flooding
1044	1/10/1995	DR	Severe Storm(s)	Severe Winter Storms, Flooding, Landslides, Mud Flows
1005	10/28/1993	DR	Fire	Fires, Mud/Landslides, Flooding, Soil Erosion
979	2/3/1993	DR	Flood	Severe Winter Storm, Mud & Land Slides, & Flooding
947	7/2/1992	DR	Earthquake	Earthquake & Aftershocks
935	2/19/1992	DR	Flood	California Snow Storms, Flooding, & Mudslides
894	1/11/1991	DR	Freeze	California Severe Freeze
145	2/14/1963		Severe Storms	California Severe Storms, Heavy Rains, & Flooding
47	12/22/1955		Flood	California Flood
15	2/5/1954		Flood	California Flood & Erosion

Disaster Number	Declaration Date	Disaster Type	Incident Type	Title
County Declarations				
5147	8/16/2016	FM	Fire	Blue Cut Fire
5144	8/9/2016	FM	Fire	Pilot Fire
CDAA	12/15/2015	CDAA	Terrorist Attack	Waterman Incident Mass Shooting
None	6/25/2015	None	Fire	Lake Fire
None	8/5/2014	None	Severe Storm(s)	August Severe Weather - Dir. Concurrence
None	8/5/2014	None	Drought	California Drought
None	4/30/2014	None	Fire	Etiwanda Fire
2955	9/3/2011	FM	Fire	Hill Fire
1952	1/21/2011	DR	Flood	Severe Winter Storms, Flooding, and Debris and Mud Flows
None	11/20/2010	None	Water	Golden State Water Company (GSWC) Contamination
1884	1/21/2010	DR	Severe Storm(s)	Severe Winter Storms, Flooding, and Debris and Mud Flows
2841	10/4/2009	FM	Fire	Sheep Fire
2836	9/1/2009	FM	Fire	Pendleton Fire
2833	9/1//2009	FM	Fire	Oak Glen Fire
2792	11/16/2008	FM	Fire	Freeway Fire Complex - (Ex. Ord. S-15-08 11/18/08)
None	10/14/2008	None	Fire	October Fire events (Foxborough, San Antonio, San Bernardino)
None	10/14/2008	None	Wind	San Bernardino Wind Event
1731	10/24/2007	DR	Fire	Wildfires, Flooding, Mud Flows, and Debris Flows
3279	10/22/2007	EM	Fire	Wildfires
2738	10/22/2007	FM	Fire	Grass Valley Fire

Disaster Number	Declaration Date	Disaster Type	Incident Type	Title
2728	9/14/2007	FM	Fire	Butler 2 Fire
None	8/8/2007	None	Water Shortage	Lucerne Valley Water Crisis
1689	1/17/2007	DR	Freezing	Severe Freeze
2653	7/11/2006	FM	Fire	Sawtooth Fire Complex
None	9/30/2005	None	Fire	Thurman Fire (San Bernardino Mountains)
3248	9/8/2005	EM	Hurricane	Hurricane Katrina Evacuation
1585	10/26/2004	DR	Severe Storm(s)	Severe Storms, Flooding, Landslides, and Mud and Debris Flows
1577	10/26/2004	DR	Severe Storm(s)	Severe Storms, Flooding, Debris Flows, and Mudslides
None	10/26/2004	None	Severe Storm(s)	Winter Storms (10/21 & 10/28/04)
None	6/29/2004	None	Water Shortage	Acute Water Shortage (Wrightwood 07, 08, & 09/04)
2503	10/21/2003	FM	Fire	Old Fire
2501	10/21/2003	FM	Fire	Ca-Grand Prix Fire-10-23-2003
CDAA 2003-02	8/22/2003	CDAA	Flood	Summer Floods (Yucca Valley/Lower Desert)
None	9/24/2002	None	Infestation	Bark Beetle Infestation (San Bernardino Mountains)
3140	9/1/1999	EM	Fire	Ca-Wildfires-08/25/1999
None	7/12/1999	None	Flood	County Flood July 99 (Forest Falls, Apple Valley, and Big Bear)
1203	2/24/1998	DR	Severe Storm(s)	Severe Winter Storms and Flooding
None	3/19/1997	None	EQ	Earthquake (Barstow/Calico RP)
None	2/1/1996	None	Hazmat	Cajon Pass Train Derailment/Hazmat Incident

Disaster Number	Declaration Date	Disaster Type	Incident Type	Title
1044	1/6/1995	DR	Severe Storm(s)	Severe Winter Storms, Flooding, Landslides, Mud Flows
None	6/26/1994	None	Heat/Fire Danger	Severe Heat & Wildland Fire Threat
979	1/8/1993	DR	Flood	Severe Winter Storm, Mud & Land Slides, & Flooding
947	6/28/1992	DR	Earthquake	Earthquake & Aftershocks
935	2/18/1992	DR	Flood	Rain/Snow/Wind Storms, Flooding, Mudslides
894	1/14/1991	DR	Freezing	Severe Freeze
872	6/28/1990	DR	Fire	Fires
None	3/13/1990		Earthquake	Upland Earthquake
None	10/31/1988		Fire	Texas Fire (Watershed Damage)
None	9/3/1987		Fire	Wildland Fires
None	7/13/1984		Weather	Unstable Weather Conditions (City of Big Bear Lake, CSD, Co. Flood Control, Victor Valley Waste Water Authority, Juniper Riviera County Water District)
687	7/1/1983	DR	Flood	Flooding
677	3/7/1983	DR	Coastal Storm	Coastal Storms, Floods, Slides & Tornadoes
635	11/5/1980	DR	Fire	Brush & Timber Fires
615	1/15/1980	DR	Flood	Severe Storms, Mudslides & Flooding
None	9/29/1979		Gasoline Shortage	Gasoline Shortage Emergency
None	6/28/1979		Water Shortage	Water Shortage (Lake Gregory)
None	7/21/1960		Fire	Major and Widespread Fires

The EMWC moved the NHMP from a quantitative to a qualitative ranking system for the 2016 update. A non- numerical rating (High, Medium, or Low) was determined for both the probability and expected impact from each screened hazard. Using the hazard rankings from the 2011 HMP, information on hazard occurrences during the last five years, and available data on specific hazard probabilities, the EMWC assessed each hazard.

4.1.1.1 Probability

High: Highly Likely/Likely. There may or may not have been historic occurrences of the hazard in the community or region but experts feel that it is *likely* that the hazard will occur in the community. Citizens feel that there is a likelihood of occurrence.

Medium: Possible. There may or may not have been a historic occurrence of the hazard in the community or region but experts feel that it is *possible* that the hazard could occur in the community. Citizens may feel that there is a likelihood of occurrence.

Low: Unlikely. There have been no historic occurrences of the hazard in the community or region and both experts and citizens agree that it is highly *unlikely* that the hazard will occur in the community.

4.1.1.2 Impact

High: Catastrophic/Critical. Both experts and citizens feel that the consequences will be significant in terms of building damage and loss of life.

Medium: Limited. Consequences are thought to be modest in terms of building damage and loss of life, limited either in geographic extent or magnitude.

Low: Negligible

Based on the review of hazards identified in similar and relevant documents and previous incidents, as well as historical knowledge of localized events, and developing trends, the EMWC Team developed a preliminary list of hazards with significant potential to occur in Ontario. The hazards the EMWC Team focused on included: **wildfire, flood, earthquake, high winds, climate change and terrorism**. With an understanding of limited resources to implement mitigation actions, the five identified hazards were further prioritized to ensure that appropriate levels of resources are allocated to the hazards determined to have the largest potential impacts on the City of Ontario.

Figure 4-1: Local Disaster Photos
Sources: LA Times, National Geographic, KABC Los Angeles

Figure 4-2: City Archive Photo

4.2 Hazard Prioritization

Once the Hazard Assessment Matrix is developed, the hazards are then given a priority ranking. In the Hazard Assessment Matrix below, the "Red" boxes represents the highest priority hazards, the "Yellow" middle priority and "Green" boxes lower priority. As shown in Hazard Assessment Matrix, the three hazards that are considered to be the greatest threat to the City of Ontario are earthquake, flood, and high winds. The Hazard Profile section profiles these hazards in depth, reviews the exposure of assets to these hazards, and estimates losses or assesses risk for significant events associated with these hazards.

In compliance with the Disaster Mitigation Act (and as further specified by Interim Final Rule 44 CFR Section 206.401(c)(2)(i)) this NHMP addresses, in substantial detail, the primary hazards facing the City. Lower priority hazards are addressed at a lesser level of detail due to their relatively fewer impacts, as identified in the hazard assessment discussion.

4.2.1 Hazard Assessment Matrix

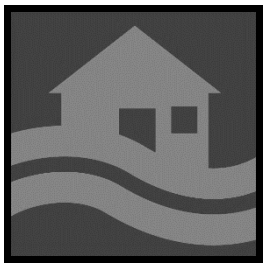
The top three hazards (as required by FEMA HMP Guidelines) for the City of Ontario are in the red section of Table 4-1 and are addressed in the 4.2 Hazard Profile section of the HMP. In addition, some of hazards in the yellow section will be addressed in this version and the rest of the hazards will be addressed in future versions of the HMP. Ultimately, all of the identified hazards will be addressed in the HMP.

Table 4-1: Hazard Assessment Matrix

		IMPACT		
		High	**Medium**	**Low**
PROBABILITY	**High**	• Earthquake • Flood • High Winds	• Water Shortage • Wildfire • Extreme Heat • Severe Storm • Hazardous Materials • Fire	
	Medium	• Transportation • Communications	• Power Outage • Infestation • Lightning	• Extreme Cold • Hail
	Low	• Dam Inundation • Terrorism • Pandemic • Nuclear	• Civil Disturbance • Cyber Attack • Radiological • Explosion	• Tornado

4.3 Hazard Profiles

4.4 Flood Hazard Profile



Floods are the second most common and widespread of all natural disasters faced by the region and cities and towns like Ontario. Most communities in the United States have experienced some kind of flooding during or after spring rains, heavy thunderstorms, winter snow thaws, or summer thunderstorms.

A flood, as defined by FEMA's National Flood Insurance Program (NFIP) is: "A general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties (at least one of which is the policyholder's property) from:

- Overflow of inland or tidal waters, or
- Unusual and rapid accumulation or runoff of surface waters from any source, or
- Mudflow, or
- Collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels."

Floods can be slow or fast rising but generally develop over a period of hours or days. Mitigation includes any activities that prevent an emergency, reduce the chance of an emergency happening, or lessen the damaging effects of unavoidable emergencies. Investing in mitigation measures now, such as: engaging in floodplain management activities, constructing barriers such as levees, and purchasing flood insurance will help reduce the amount of structural damage and financial loss from other types of property damage should a flood or flash flood occur.

The standard for flooding is the 1% annual chance flood, commonly called the 100-year flood, the benchmark used by the FEMA to establish a standard of flood control in communities throughout the country. The 1% annual chance flood is also referred to as the base flood.

The 1% annual chance flood is the flood that has a 1% chance of being equaled or exceeded in any given year and it could occur more than once in a relatively short period of time. By comparison, the 10% flood (10-year flood) means that there is a 10% chance for a flood of its size to occur in any given year.

4.4.1 Regulatory Environment

The following agencies are tasked with Flood Control in the City of Ontario and the city works cooperatively with each to alleviate the flood hazard.

- City of Ontario, Ontario Public Works and the Office of Emergency Services
- County of San Bernardino Flood Control, County Public Works and County Office of Emergency Services
- State of California Department of Water Resources (DWR)
- United States Army Corps of Engineers

4.4.1.1 National Flood Insurance Program (NFIP)

The NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in participating communities. As a participating member of the NFIP, Ontario is dedicated to protecting more than 100 homes with policies currently in force. Like most communities participating in NFIP, FEMA has prepared a detailed Flood Insurance Study (FIS)

for areas of San Bernardino County, including the Ontario. The study presents water surface elevations for floods of various magnitudes, including the 1-percent annual chance of flood (the 100-year flood) and the 0.2-percent annual chance of flood (the 500-year flood). Base flood elevations and the boundaries of the 100- and 500-year floodplains are shown on FIRMs. More information on location and geographic extent of the Flood Insurance Rate Maps (FIRMs) are provided in this section.

The Ontario entered the regular phase of the NFIP on 12/02/1980. As a participant in the NFIP, the Ontario is dedicated to regulating development in the FEMA regulated floodplain areas in accordance with NFIP criteria. Before a permit to build in a floodplain area is issued, Ontario ensures that two basic criteria are met:

- All new buildings and developments undergoing substantial improvements must, at a minimum, be elevated to protect against damage by the 100-year flood.
- New floodplain developments must not aggravate existing flood problems or increase damage to other properties.

Structures permitted or built in the County/City before the NFIP regulatory requirements were incorporated into the Ontario ordinances (before the effective date of the Ontario's FIRM) are called "pre-FIRM" structures. For the Ontario, pre-FIRM structures are those permitted or built before 12/02/1980.

Extensive FEMA NFIP databases are used to track claims for every participating community including Ontario. NFIP insurance data provided by FEMA indicates that as of 09/02/2016, there were 128 policies in the Ontario, resulting in $37,939,000.00 of insurance in force; this amounts to $83,043in total premiums. Of the 128 policies, only 21 are for structures located within the 1% annual chance flood zones, while the remaining 107 policies are for structures located outside of the FEMA identified floodplain.

There have been ***16*** closed paid losses totaling $ 74,314. Of the closed paid losses there have been 0 substantial damage claims. Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to it's before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Based on this analysis of insurance coverage, the Ontario has assets at risk to the 100-year flood. Of the 88 improved parcels within the 100-year floodplain, only 21 (18.48 %) of those parcels maintain flood insurance[1]. These uninsured structures located in mapped floodplain areas are especially vulnerable.

Currently, the City of Ontario contains (1) RL properties under their jurisdictional umbrella. The total dollar amount of claims paid to date by the NFIP is $ 74,314.

All of the RL properties that have experienced flooding in (explain area of flood hazard) of Ontario are due to urban Street flooding in localized areas. Some mitigation on these properties has been conducted and the Ontario is currently tracking mitigation actions through standardized forms as required by FEMA. Of the 1 repetitive loss properties, all have been mitigated.

[1] An improved property owner may not carry flood insurance for a number of reasons; not everyone is required to carry flood insurance. Structures carrying federally-backed mortgages that are in a SFHA are required to carry flood insurance in Ontario. Owners who have completed the terms of the mortgage or who purchased their property outright may not choose to carry flood insurance and instead bear the costs of recovery on their own.

Important to Note: A property does not have to be currently carrying a flood insurance policy to be considered a RL or SRL property. Often homes in communities are not carrying flood insurance but are still on the community's repetitive loss list. The "repetitive loss" designation follows a property from owner to owner; from insurance policy to no insurance policy, and even after the property has been mitigated. Having an insurance policy and making claims that fall into the repetitive loss criteria will put a property on the RL list. Even after the policy on a property has lapsed or been terminated, the property will remain on Ontario RL list.

Table 4-2: Community Rating System Status and Information

Community Rating System (CRS) Status & Information ONTARIO, CITY OF				
CID	060278			
NFIP Status	PARTICIPATING			
FIRM Status	REVISED			
Map Date	09/02/16			
Contact Type **B9**	Floodplain Administrator			
Name	Louis Abi-Younes			
Title	*City Engineer*			
Phone	*909-395-2025*		CRS Premium Discounts	
Email	*labi-younes@ci.ontario.ca.us*			
CRS Class	0		**Class**	**Discount**
Total Premium	$83,043.00		1	45%
V-Zone Policy Count	0		2	40%
A-Zone Policy Count	21		3	35%
Total Policy Count	128		4	30%
Total Coverage	$37,939,000.00		5	25%
Total Claims Count	16		6	20%
Total Claims Paid	$74,314.00		7	15%
Substantial Damage Class	0		8	10%
Repetitive Loss Structure	1		9	5%
Severe Repetitive Loss S	0		10/0	0%

The Privacy Act of 1974 (5 U.S.C. 522a) restricts the release of certain types of data to the public. Flood insurance policy and claims data are included in the list of restricted information. FEMA can only release such data to state and local governments, and only if the data are used for floodplain management, mitigation, or research purposes. Therefore, this plan does not identify the repetitive loss properties or include claims data for any individual property.

For more information on California Regulation and the NFIP, please see California's Department of Water Resources Quick Guide here: http://www.water.ca.gov/floodmgmt/lrafmo/fmb/docs/CAQG-screen.pdf

4.4.2 Past Occurrences

Ontario has been subject to periodic flooding. FEMA's Flood Insurance Study (FIS) reports the following on flooding issue:

Issue 1: Urban street flooding due to storm drain system being maxed to capacity and not able to handle the volume of run off.

A majority of the flood risk within Ontario is specifically subject to inundation as a result of heavy rainfall and resulting urban street flooding. The extent of flooding associated with a 1-percent annual probability of occurrence (the base flood or 100-year flood) is used as the regulatory boundary by many agencies, and helps identify the location and extent of flooding in areas across the Ontario. This area is also referred to as the SFHA, and is a convenient tool for assessing vulnerability and risk in flood-prone communities.

Table 4-3: Estimated Flooding Area

Flood Hazard Type	Sum of Acres	Sum of Square Miles
100-Year Flood	580	0.91
100-Year, Floodway	-	-
500-Year Flood	26,562	41.50
500-Year, Protected by Levee	2,260	4
Total	**29,403**	**45.94**

Table 4-4: Estimate loss amounts

Flood Hazard Zone	Improved Parcel Count	Improvement Value Exposure ($000)	Land Value Exposure ($000)	Total Exposure ($000)
100-Year Flood	88	$ 14,267	$ 12,747	$ 27,014
500-Year Flood	32,160	$ 15,810,305	$ 7,684,001	$ 23,494,306
500-Year, Protected by Levee	2,196	$ 1,149,495	$ 297,386	$ 1,446,882
Grand Total	**34,444**	**$ 16,974,067**	**$ 7,994,135**	**$ 24,968,202**

4.4.3 Location / Geographic Extent

Figure 4-9 shows 100-year and 500-year floodplain zones, which are estimated inundation areas based on a flood that has a 1-percent (100-year) and 2-percent (500-year) chance of occurring in any given year. Ontario contains over 29,402 acres of identified flood hazard areas. Table 4-9a provides the total area for both the 100-year and 500-yr. flood hazard areas.

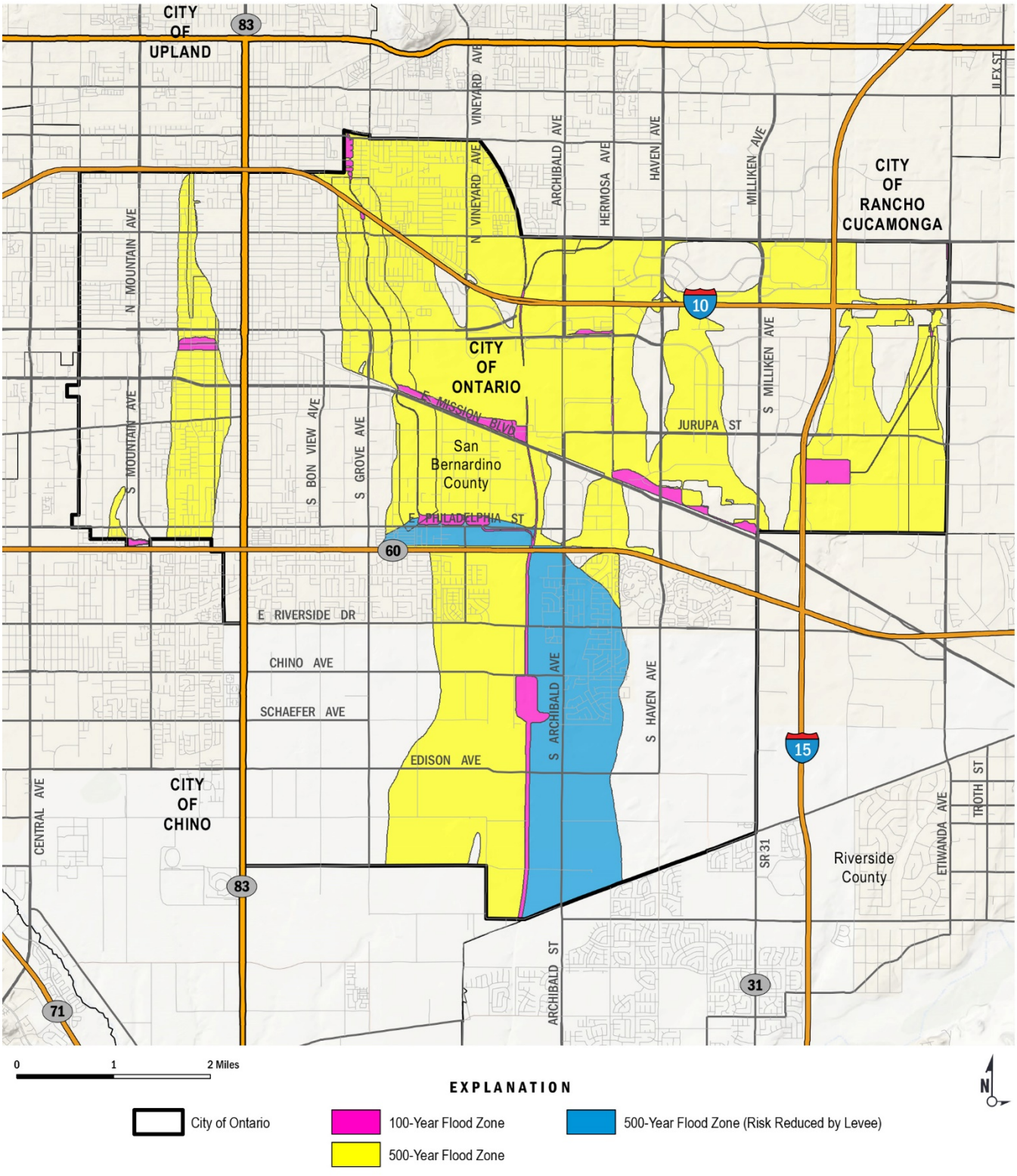


Figure 4-3: 100 and 500-YR Flood Zones

4.4.4 Magnitude/ Severity

In urban areas like Ontario, flood problems are intensified because new homes and other structures, and new streets, driveways, parking lots, and other paved areas decrease the amount of open land available to absorb rainfall and runoff, thus increasing the volume of water that must be carried away by water ways.

4.4.4.1 Flash Flooding

Flash flooding tends to occur in the summer and early fall because of the monsoon rains and is typified by increased humidity and high summer temperatures. Many highways do not have bridges but convey water across the road with dip crossings. Flash flooding causes road and bridge wash outs and erosion of earthen channels and basins when they occur near these facilities. Cities and towns often experience street closures for several days due to sediment transport and road damage. The valley floor in many areas is very flat so even minor rain events can produce flooding of roads and private property. In coordination with local jurisdictions, the County of San Bernardino Flood Control District has prepared Master Drainage plans for many cities and towns to provide a plan for reducing flooding due to minor storms. Maps can be found on the County's Department of Public Works website here:

http://cms.sbcounty.gov/dpw/FloodControl/Planning/MPD.aspx

However, local resources are not sufficient to cover the cost of the construction of the drainage systems. The densely populated (75% of the county population) urban valley region contains the headwaters of the Santa Ana River. The San Gabriel and San Bernardino Mountains border the North side of the valley are steep reaching 5,000 feet with alluvial fans which are developed and densely populated.

Figure 4-4: Typical California urban street flooding

Figure 4-5: An intersection in Ontario is flooded after a storm

Figure 4-6: urban street flooding

Figure 4-7: Flooding in Ontario

4.4.5 Frequency/ Probability of Future Occurrences

The FIRM maps not only identify the flood hazard zones for insurance and floodplain management purposes, but also provide a statement of probability of future occurrence. FIRM maps are located in Annex A.

A 500-year flood has a 0.2-percent chance of occurring in any given year; a 100-year flood has a 1-percent chance, a 50-year flood has a 2-percent chance, and a 10-year flood has a 10-percent chance of occurrence. Although the recurrence interval represents the long-term average period between floods of specific magnitude, significant floods could occur at shorter intervals or even within the same year. The FIRM maps typically identify components of the 500-year and 100-year floodplains. Figure 4-3 shows FEMA 100-year and 500-year flood zones.

Flood hazards to the area can be classified into two general categories: flash flooding down natural channels and sheet flooding across the alluvial fans. A 100-year flood or larger event is anticipated to result in extensive property damage and temporary displacement of hundreds of households. Catastrophic failure of any one of four retaining structures when full, has the potential to cause considerable damage in Ontario.

4.4.6 Goals

S2 Minimized risk of injury, loss of life, property damage and economic and social disruption caused by flooding and inundation hazards.

4.4.7 Policies

S2-1 *Entitlement and Permitting Process*. We follow State guidelines and building code to determine when development proposals require hydrological studies prepared by a State-certified engineer to assess the impact that the new development will have on the flooding potential of existing development down-gradient.

S2-2 *Flood Insurance*. We will limit development in flood plains and participate in the National Flood Insurance Program.

S2-3 *Facilities that Use Hazardous Materials*. We comply with state and federal law and do not permit facilities using, storing, or otherwise involved with substantial quantities of onsite hazardous materials to be located in the 100 year flood zone unless all standards of elevation, flood proofing and storage have been implemented to the satisfaction of the Building Department.

S2-4 *Prohibited Land Uses*. We prohibit the development of new essential and critical facilities in the 100-year floodplain.

S2-5 *Storm Drain System*. We maintain and improve the storm drain system to minimize flooding.

S2-6 *Use of Flood Control Facilities*. We encourage joint use of flood control facilities as open space or other types of recreational facilities.

4.5 Wildfire Hazard Profile

As defined in the California Fire Protection (CAL FIRE) 2010 Strategic Fire Plan, a wildfire event is an unwanted wildland fire including unauthorized human-caused fires, escaped wildfire use events, escaped prescribed wildfire projects, and all other wildfires.

4.5.1 Regulatory Environment

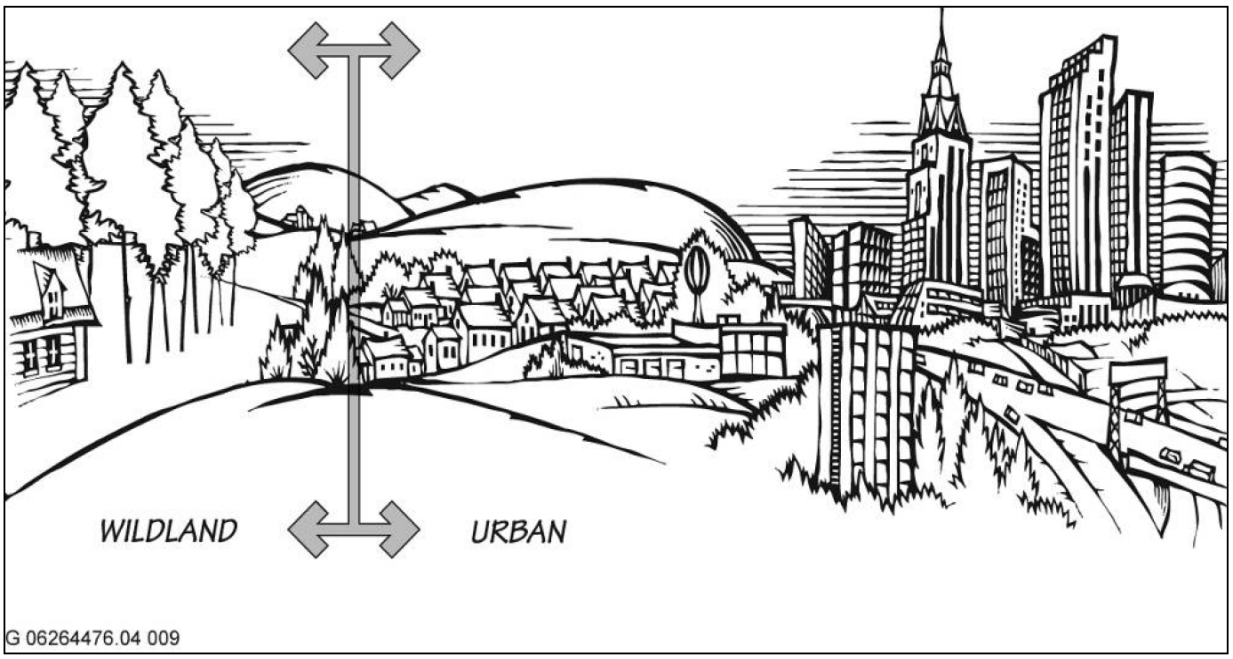
Wildfire regulatory requirements are mandated by the State of California and the City of Ontario.

4.5.1.1 State

Wildfire State Responsibility Area (SRA) Fire Safe Regulations outline basic wildland fire protection standards for local jurisdictions. SRA Fire Safe Regulations (if policed) can decrease the risk of wildfire events in the wildland interface. SRA Fire Safe Regulations do not supersede local regulations, which equal or exceed minimum state regulations. The State statute for wildfire protection is Public Resources Code, Section 4290. Requirements in the code include information on the following (CA Fire Alliance):

- Road Standards for Fire Equipment Access
- Standards for Signs Identifying Streets, Roads and Buildings
- Minimum Private Water Supply Reserves for Emergency Fire Use
- Fuel Breaks and Greenbelts

Figure 4-8: Wildland Urban Interface



4.5.1.2 Local

The City of Ontario is located in a Local Responsibility Area. Fire protection for the City of Ontario is the responsibility of the Ontario Fire Department. The Ontario Fire Department is comprised of 161 staff members. Emergency response personnel are deployed from 10 fire stations located strategically throughout the City.

To reduce risks from wildland fires, the City of Ontario adopted Title 4, Chapter 4 and Title 9 of the Municipal Code, Standards for New Construction Adjacent to Open Space Lands Where Wildfire is a threat. Title 9 provides development standards for new construction adjacent to permanent open or other open lands where no development is anticipated in the near future (as identified in the General Plan) and where wildfire is a threat. Some of the fire reduction strategies incorporated in the code include providing for fire access roads, maintaining a defensible space of non-combustible vegetation around structures, and installing indoor sprinkler systems.

4.5.2 Past Occurrences

Wildfire events are of major concern to the City of Ontario. Cal FIRE maintains a database of wildfire perimeters. There have been 2 major wildland fires in the City of Ontario. The 1958 Pole Line Fire and the 2007 Walker fire that burned 166 acres of dairy pasture and with no homes lost. The Map on the next page shows where those historical burn areas in the City of Ontario have occurred. Fortunately in the past five years there have been no significant wildland fires within the City of Ontario.

4.5.3 Location/Geographic Extent

Using information from the California Department of Forestry (CAL FIRE) Figure 4-10 illustrates the areas at risk to a wildfire event. The areas with the highest risk of wildfire are the in the southern portions of the Ontario. The remainder of Ontario the is urban. The area at risk shrinks daily due to the rapid construction that is taking place throughout Ontario.

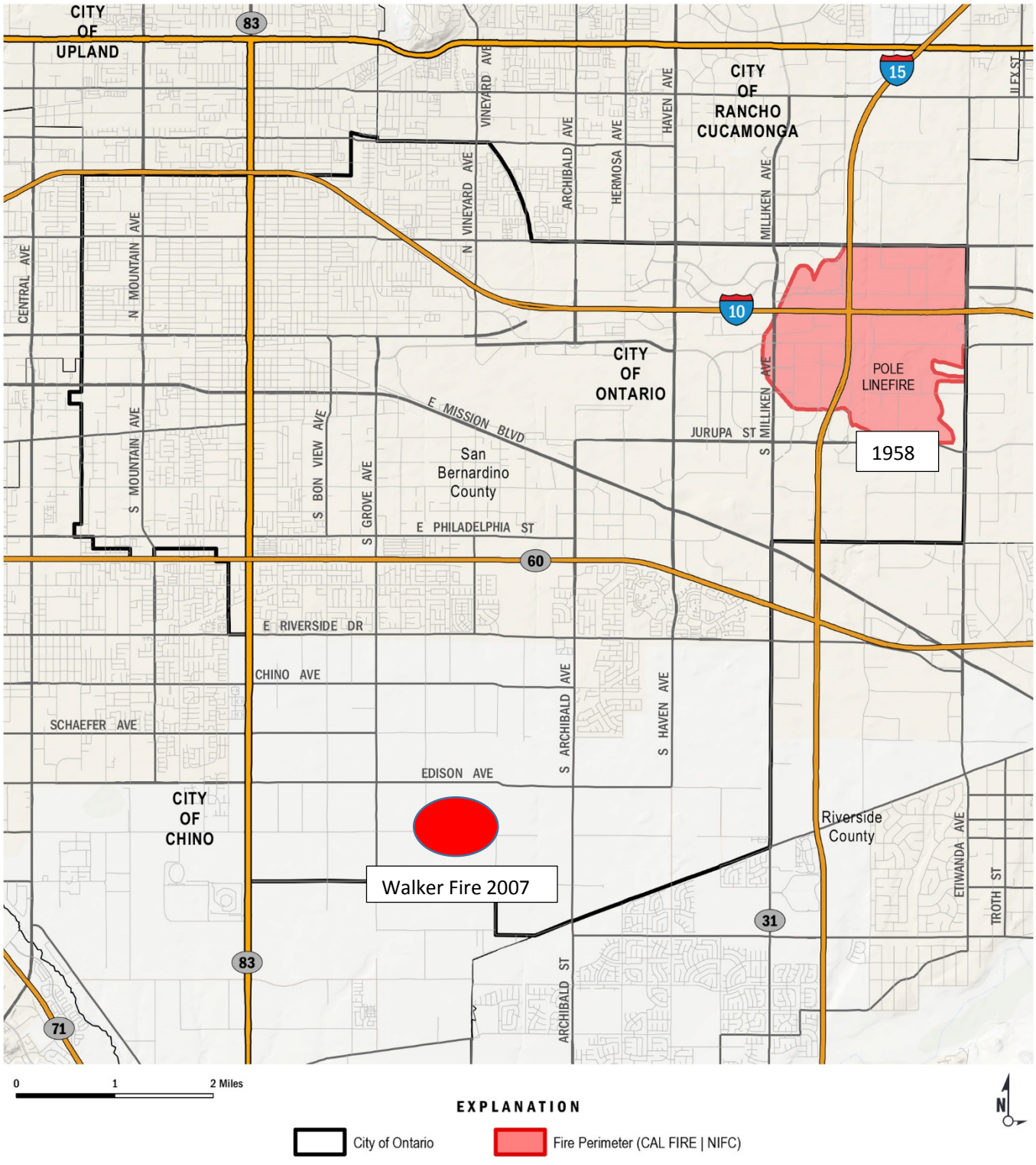


Figure 4-9: Fire Perimeter Map

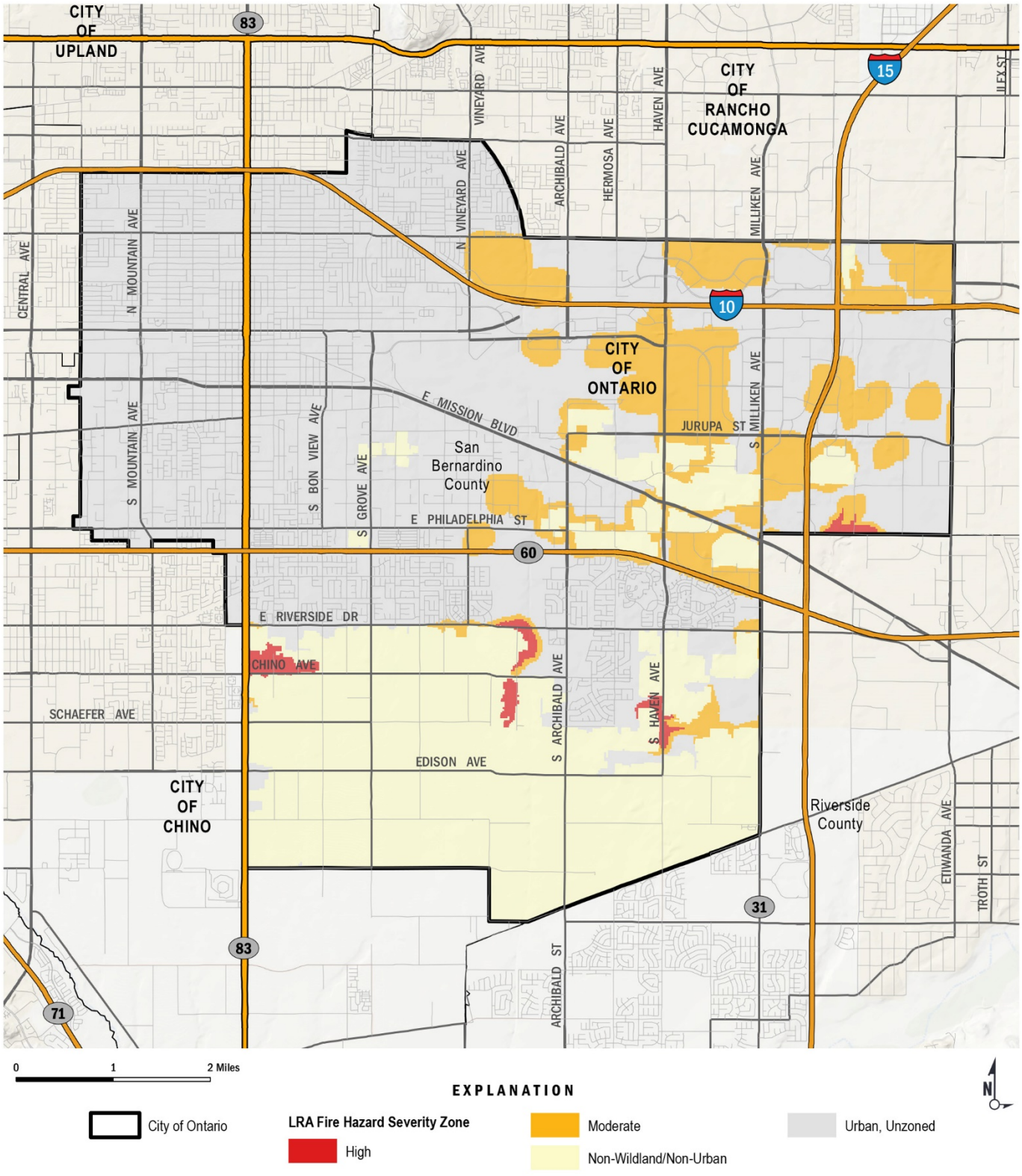


Figure 4-10: NRA Fire Hazard Severity Zones

4.5.4 Magnitude/Severity

The magnitude and severity of a wildfire event is measured by calculating the number of acres burned in a specific wildfire event. CAL FIRE adopted Fire Hazard Severity Zone maps for LRA in June 2008. The Fire Severity Zones for Ontario identify areas of Very High, High, and Moderate fire hazard severity and are mapped in Figure 4-10.

Fire Severity Zones are used in determining additional protective measures required when building new structures or remodeling older structures within the particular zone. Additional measures must be taken on the property around a structure in the higher ranked fire Severity Zones.

Fire hazard mapping is a way to measure the physical fire behavior to predict the damage a fire is likely to cause. Fire hazard measurement includes vegetative fuels, probability of speed at which a wildfire moves the amount of heat the fire produces, and most importantly, the burning fire brands that the fire sends ahead of the flaming front.

The model used to develop the information in accounts for topography, especially the steepness of the slopes (fires burn faster as they burn up-slope.). Weather (temperature, humidity, and wind) also has a significant influence on fire behavior. The areas depicted as moderate and high in are of particular concern and potential fire risk in these are constantly increasing as human development, and the wildland urban interface areas expand.

4.5.5 Frequency/Probability of Future Occurrences

In Ontario, wildfire season commences in the late Spring \ early Summer when temperatures are high, humidity is low, and conditions remain dry. The season continues into the Fall, when the City experiences high velocity, very dry winds coming out of the desert. A statewide drought beginning in 2011 has caused the state to be the driest it's been since record keeping began back in 1895. This has caused extremely dry conditions in creating plentiful fuel sources for wildfires. The frequency and probability of wildfire in the City of Ontario decreases monthly because of the rapid construction in the dairy area which will completely mitigate the threat in a few years.

USGS LANDFIRE (Landscape Fire and Resource Management Planning Tools), is a shared program between the wildland fire management programs of the U.S. Department of Agriculture Forest Service and U.S. Department of the Interior, providing landscape scale geo-spatial products to support cross-boundary planning, management, and operations. Historical fire regimes, intervals, and vegetation conditions are mapped using the Vegetation Dynamics Development Tool (VDDT). This USGS data supports fire and landscape management planning goals in the National Cohesive Wildland Fire Management Strategy, the Federal Wildland Fire Management Policy, and the Healthy Forests Restoration Act.

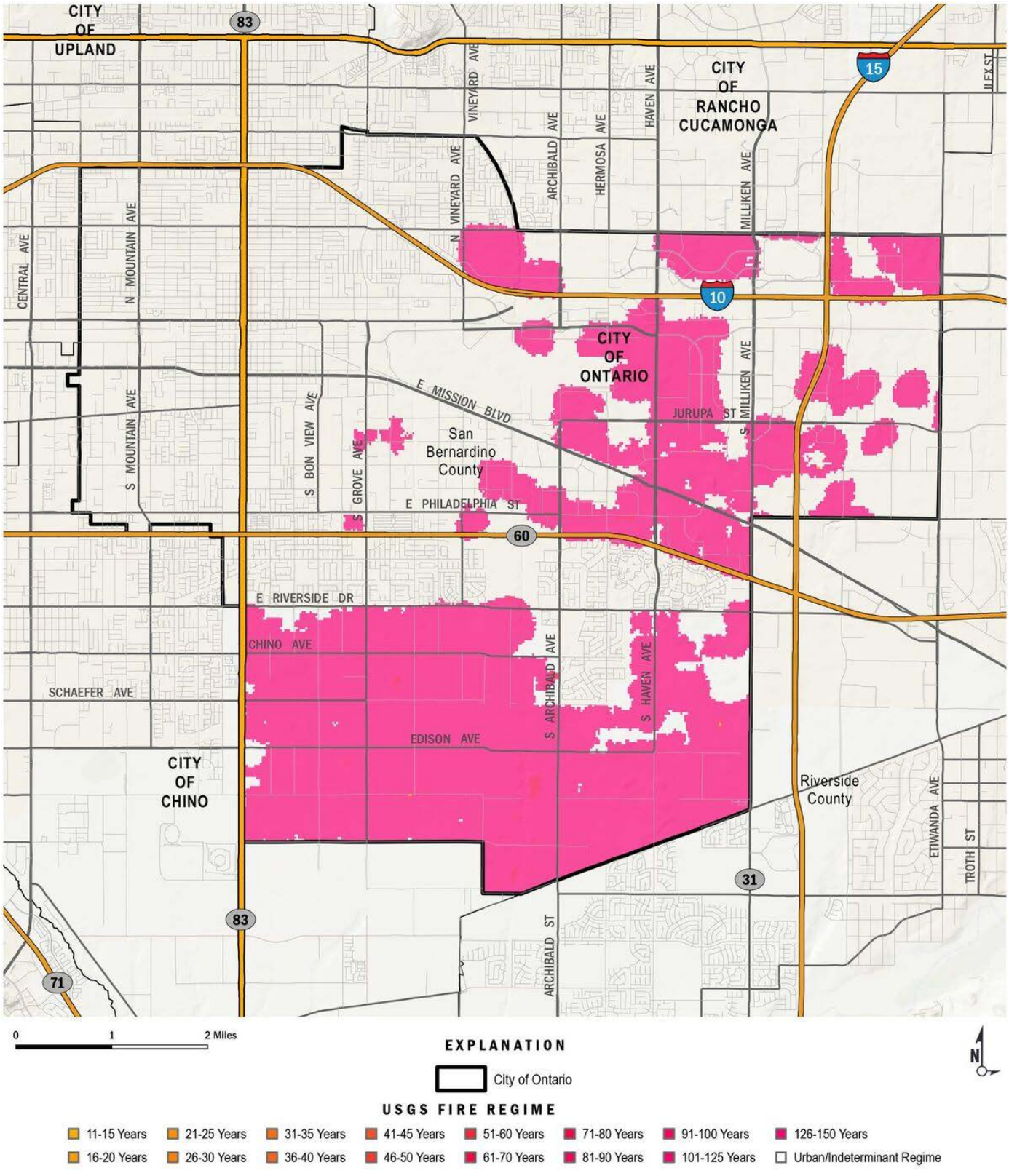


Figure 4-11: Wildfire Return Interval Map

As part of the USGS Landfire data sets, the Mean Fire Return Interval (MFRI) layer quantifies the average period between fires under the presumed historical fire regime. MFRI is intended to describe one component of historical fire regime characteristics in the context of the broader historical time period represented by the LANDFIRE Biophysical Settings (BPS) layer and BPS Model documentation.

MFRI is derived from the vegetation and disturbance dynamics model VDDT (Vegetation Dynamics Development Tool) (LF_1.0.0 CONUS only used the vegetation and disturbance dynamics model LANDSUM). This layer is created by linking the BpS Group attribute in the BpS layer with the Refresh Model Tracker (RMT) data and assigning the MFRI attribute. This geospatial product should display a reasonable approximation of MFRI, as documented in the RMT. See Figure 4-11 for predicted fire return interval for the jurisdictional area.

4.5.6 Future Development in High Fire Hazard Severity Zones (If applicable)

Following the Great Recession of 2009 -2012, the City of Ontario has experience rapid growth in all areas of the city. This construction boom of both commercial and residential units reduces the area that can experience wild fires. That is the reason the city has not experience a large wildfire since the Walker Fire of 2007

Excerpt from the Ontario Plan Safety Element:

Figure 4-12: Ontario firefighters work to extinguish a burning building in the City.

The City of Ontario seeks to mitigate the hazards to life, property and economic viability caused by everyday events and major disasters through the provision of fire, rescue, emergency medical and specialty emergency response services. In Ontario, fires normally originate within a single structure, such as a commercial or residential building. Given the amount of industry and commerce in Ontario, commercial fires account for nearly 80% of total annual damage loss. Residential fire threat, on the other hand, results in more death or injury than commercial fires. Residential fire threats are a particular cause for concern as more than one-half of all Ontario's residential structures were built before 1970, prior to codes that required use of fire resistant building materials. In addition, the City is subject to fire risks associated with earthquakes.

Due to the local topography and nearby Cajon Pass, Santa Ana Winds by far pose the greatest fire hazard to the City. The undeveloped areas of the New Model Colony which have similar characteristics to an urban-wildland interface, have experienced severe fires under high wind conditions. Moreover, the Santa Ana winds pose a continual fire conflagration hazard to any dense area of the City, with an increased risk to older portions of Ontario.

Ontario's commercial and industrial facilities increase the possibility of fires involving hazardous materials, which could affect nearby residential areas. Ontario is also surrounded and bisected by major transportation networks and pipeline transfer systems which add further risk.

4.5.7 Goals

S3 Reduced risk of death, injury, property damage and economic loss due to fires, accidents and normal everyday occurrences through prompt and capable emergency response.

4.5.8 Policies

S3-1 *Prevention Services*. We proactively mitigate or reduce the negative effects of fire, hazardous materials release, and structural collapse by implementing the adopted Fire Code.

S3-2 *Community Outreach*. We provide education to local schools and community groups to promote personal and public safety.

S3-3 *Fire and Emergency Medical Services*. We maintain sufficient fire stations, equipment and staffing to respond effectively to emergencies.

S3-4 *Special Team Services*. We maintain effective special rescue services.

S3-5 *Emergency Communication Services*. We maintain a 9-1-1 emergency communication and dispatch center.

S3-6 *Interagency Cooperation*. In order to back up and supplement our capabilities to respond to emergencies, we participate in the California Fire Rescue and Mutual Aid Plan.

S3-7 *Water Supply and System Redundancy*. We monitor our water system to manage firefighting water supplies.

S3-8 *Fire Prevention through Environmental Design*. We require new development to incorporate fire prevention consideration in the design of streetscapes, sites, open spaces and buildings. (Link to Community Design Element)

S3-9 *Resource Allocation*. We analyze fire data to evaluate the effectiveness of our fire prevention and reduction strategies and allocate resources accordingly.

Development in Ontario is also regulated by the following municipal codes:

- Title 4, Public Safety, chapter 4 of the City fire code, and
- Title 9 the City Development Code

Figure 4-13: Walker Fire
OnSceneTV/HD

Figure 4-14: Ontario Walker Fire 2007

Figure 4-15: photos by OnSceneTV\HD

4.6 Earthquake /Geologic Hazard Profile

An earthquake is both the sudden slip on an active fault and the resulting shaking and radiated seismic energy caused by the slip (USGS, 2009). The majority of major active faults in the Ontario area are strike-slip faults. For this type of fault, during an earthquake event, one side of a fault line slides past the other. The rupture from this type of fault extends almost vertically into the ground.

Earthquakes are a significant concern to the City of Ontario. The area around Ontario is seismically active since it is situated on the boundary between two tectonic plates. Describe seismic activity and faults for the region. Earthquakes can cause serious structural damage to buildings, overlying aqueducts, transportation facilities, utilities, and can lead to loss of life. In addition, earthquakes can cause collateral emergencies including dam and levee failures, fires, and landslides. Seismic shaking is by far the single greatest cause of damage from an earthquake in the City of Ontario followed by liquefaction.

Liquefaction occurs when loosely packed sandy or silty materials saturated with water are shaken hard enough to lose strength and stiffness. Liquefied soils behave like a liquid and are responsible for tremendous damage in an earthquake. For example, it can cause buildings to collapse, pipes to leak, and roads to buckle.

4.6.1 Regulatory Environment

Numerous building and zoning codes exist at a state and local level to decrease the impact of an earthquake event and resulting liquefaction on residents and infrastructure. Building and zoning codes include the Alquist-Priolo Earthquake Fault Zoning Act of 1972, Seismic Hazards Mapping Act of 1990, 2013 California Standards Building Code (CSBC), and City of Ontario General Plan. To protect lives and infrastructure in the City of Ontario, the following building and zoning codes are used.

4.6.1.1 State

The 1971 San Fernando Earthquake resulted in the destruction of numerous structures built across its path. This led to passage of the Alquist-Priolo Earthquake Fault Zoning Act. This Act prohibits the construction of buildings for human occupancy across active faults in the State of California. Similarly, extensive damage caused by ground failures during the 1989 Loma Prieta Earthquake focused attention on decreasing the impacts of landslides and liquefaction. This led to the creation of the Seismic Hazards Mapping Act. This Act increases construction standards at locations where ground failures are probable during earthquakes. Active faults in San Bernardino County have been included under the Alquist-Priolo Geologic Hazards Zones Act and Seismic Hazards Mapping Act.

4.6.1.2 Local

The 2013 California Building Standards Code (also known as Title 24) became effective for the County on January 1st, 2014. Title 24 includes CBC Section 3417: Earthquake Evaluation and Design for Retrofit of Existing Buildings which can be viewed at http://www.documents.dgs.ca.gov/bsc/2015TriCycle/Pre-Cycle-2015/CBC-CEBC/BSC-0X-15-ET-Pt10-Agenda-4d.pdf.

The 2013 CSBC is based on the International Building Codes (IBC), which is widely used throughout the United States. CSBC was modified for California's conditions to include more detailed and stringent building requirements. The City of Ontario Building Department utilizes the 2013 CSBC to regulate the infrastructure in the City of Ontario. This includes unreinforced masonry (URM) buildings. For new buildings, Ontario includes earthquake safety provisions, with enhancements for essential services buildings, hospitals, and public schools.

Figure 4-16: Earthquakes can be so strong they knock houses and buildings off their foundation.

Ontario is susceptible to earthquakes, settlement of alluvial deposits that underlie the region, and subsidence caused by rapid withdrawal of groundwater. In order for the City to thrive and continue to attract investment, residents and investors need assurance that the City is prepared for and will effectively deal with seismic and geologic hazards.

4.6.2 Past Occurrences

The LHMP Planning Team noted the following regional and local events for the seismic activity in the City of Ontario. Although no significate damage result from the earthquakes occurred in the City of Ontario it is only a matter of time before a large damaging earthquake will strike the area

Table 4-5: City of Ontario Seismic Activity

Date	Name
9/12 1970	5.2M Lyle Creek
2/28/1990	5.4 M Upland
6/28/1992	7.3M Big Bear\Landers
10/16/ 1999	7.1M Hector Mine
7/29/2008	5.4M Chino Hills

Table 4-6 shows earthquakes greater than Magnitude 4.0 that have been felt within the San Bernardino County area in the last five years.

Table 4-6: Earthquakes: 2010-2015 San Bernardino County

Date	Name
9/14/2011	Calimesa 4.1
1/15/2014	Fontana 4.4
7/5/2014	Running Springs 4.6
3/29/2014	Brea 5.1
7/25/2015	Fontana 4.2
9/16/15	Big Bear Lake 4.0
12/30/2015	Muscoy 4.4
1/6/2016	Banning 4.4

There are hundreds more small (M<4.0) earthquakes that have occurred within San Bernardino County during this same time frame. Those with a magnitude of below 4.0 are not listed.

4.6.3 Location/Geographic Extent

The risk of seismic hazards to residents of Ontario is based on the approximate location of earthquake faults within and outside the region. This map includes Alquist-Priolo Geologic Hazards Zones Act created under the Seismic Hazards Mapping Act and the USGS Quaternary Fault and Fold Database of the United States. The USGS database contains information on faults and associated folds in the California that are believed to be sources of M>6 earthquakes during the Quaternary (the past 2.6 million years). Figure 4-17 shows faults near the Ontario. There are no known faults in the City of Ontario. Per the California Department of Conservation's Earthquake Fault Zone Maps, Ontario is near the following active fault zones or regulatory fault zones managed by the Department of Conservation.

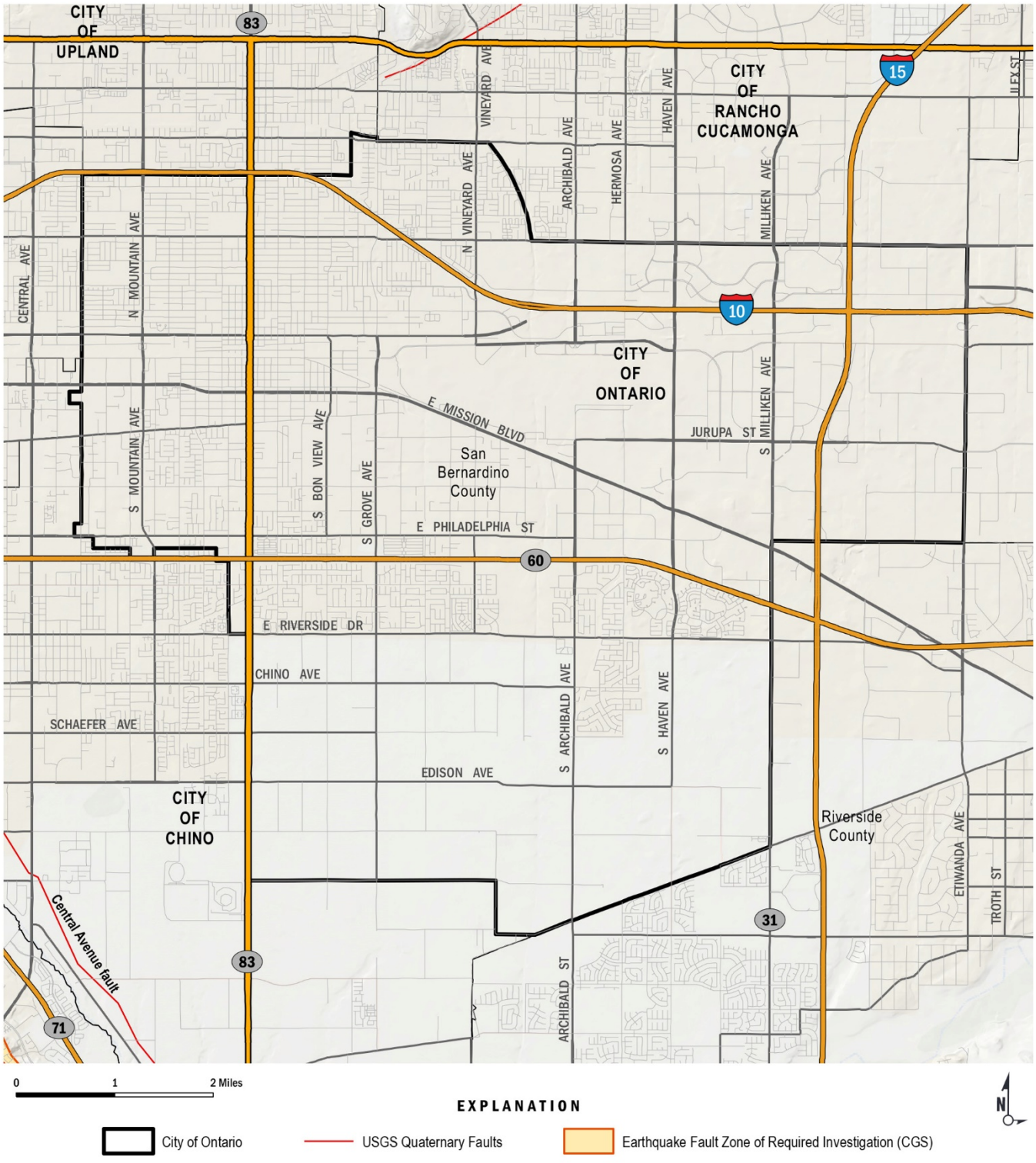


Figure 4-17: Earthquake Fault Zones

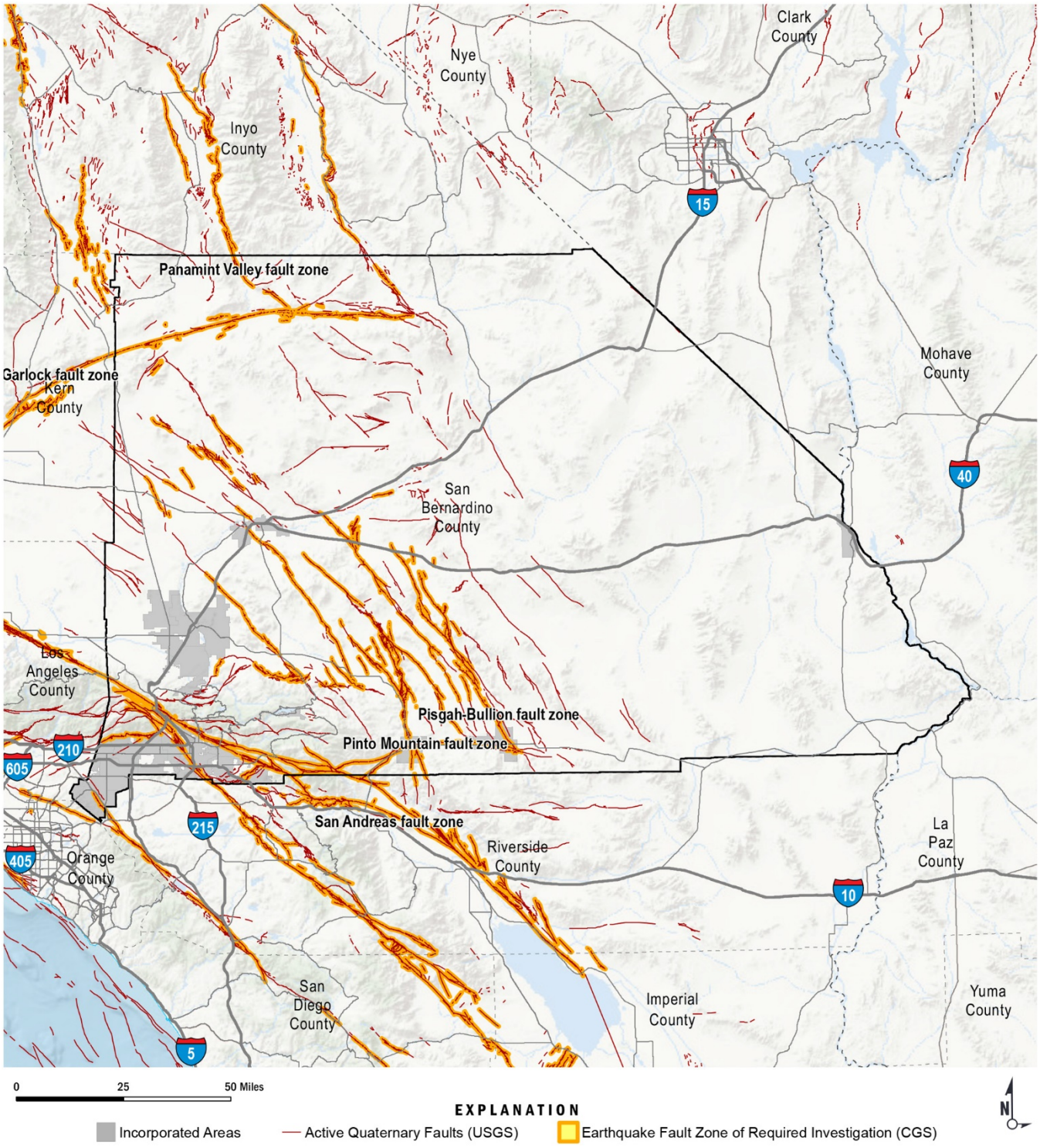


Figure 4-18: Active Fault Map for San Bernardino County

IMPORTANT TO NOTE: The Earthquake Fault Zone of Required Investigation data are published by the California Geological Survey. These zones are delineated to assist cities and counties in fulfilling their responsibilities for protecting the public safety from the effects of earthquake fault rupture as required by the Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Sections 2623 et seq)

Historical and geological records show that Southern California has a long history of seismic events. Southern California is probably best known for the San Andreas Fault, a 400-mile long fault running from the Mexican border to a point offshore, west of San Francisco. Geologic studies show that over the past 1,400 to 1,500 years, large earthquakes have occurred at about 130-year intervals on the southern San Andreas Fault. As the last large earthquake on the southern San Andreas occurred in 1857, that section of the fault is considered a likely location for an earthquake within the next few decades.

But San Andreas is only one of dozens of known earthquake faults that crisscross Southern California. Beyond the known faults, there are a potentially large number of "blind" faults that underlie the surface of Southern California. One such blind fault was involved in the Whittier Narrows earthquake in October 1987.

Although the most famous of the faults, the San Andreas, is capable of producing an earthquake with a magnitude of 8+ on the Richter scale, some of the "lesser" faults have the potential to inflict greater damage on the urban core of the Los Angeles Basin and nearby cities.

4.6.4 Magnitude/Severity

The most common method for measuring earthquakes is magnitude, which measures the strengths of earthquake. Although the Richter scale is known as the measurement for magnitude, the majority of scientists currently use either the Mw Scale or Modified Mercalli Intensity (MMI) Scale. The effects of an earthquake in a particular location are measured by intensity. Earthquake intensity decreases with increasing distance from the epicenter of the earthquake.

The magnitude of an earthquake is related to the total area of the fault that ruptured, as well as the amount of offset (displacement) across the fault. As shown in Table 4-7, there are seven earthquake magnitude classes, ranging from great to micro. A magnitude class of great can cause tremendous damage to infrastructure in Ontario, compared to a micro class, which results in minor damage to infrastructure.

The MMI Scale has 12 intensity levels. Each level is defined by a group of observable earthquake effects, such as ground shaking and/or damage to infrastructure. Levels I through VI describe what people see and feel during a small to moderate earthquake. Levels VII through XII describe damage to infrastructure during a moderate to catastrophic earthquake

Table 4-7: Moment Magnitude Scale

Earthquake Magnitude Classes		
Magnitude Class	**Magnitude Range (M = Magnitude)**	**Description**
Great	M > 8	Tremendous damage
Major	7 <= M < 7.9	Widespread heavy damage
Strong	6 <= M < 6.9	Severe damage
Moderate	5 <= M < 5.9	Considerable damage
Light	4 <= M < 4.9	Moderate damage
Minor	3 <= M < 3.9	Rarely causes damage.
Micro	M < 3	Minor damage

Table 4-8: Modified Mercalli Scale

Earthquake Magnitude and Intensity		
Magnitude (M_w)	**Intensity (Modified Mercalli Scale)**	**Description**
1.0 – 3.0	I	I. Not felt except by very few people under especially favorable conditions.
3.0 – 3.9	II – III	II. Felt by a few people, especially those on upper floors of buildings. Suspended objects may swing.
		III. Felt quite noticeably indoors. Many do not recognize it as an earthquake. Standing motorcars may rock slightly.
4.0 – 4.9	IV – V	IV. Felt by many who are indoors; felt by a few outdoors. At night, some awakened. Dishes, windows and doors rattle.
		V. Felt by nearly everyone; many awakened. Some dishes and windows broken; some cracked plaster; unstable objects overturned.
5.0 – 5.9	VI – VII	VI. Felt by everyone; many frightened and run outdoors. Some heavy furniture moved; some fallen plaster or damaged chimneys.
		VII. Most people alarmed and run outside. Damage negligible in well-constructed buildings; considerable damage in poorly constructed buildings.
6.0 – 6.9	VII – IX	VIII. Damage slight in special designed structures; considerable in ordinary buildings; great in poorly built structures. Heavy furniture overturned. Chimneys, monuments, etc. may topple.
		IX. Damage considerable in specially designed structures. Buildings shift from foundations and collapse. Ground cracked. Underground pipes broken.
7.0 and Higher	VIII and Higher	X. Some well-built wooden structures destroyed. Most masonry structures destroyed. Ground badly cracked. Landslides on steep slopes.
		XI. Few, if any, masonry structures remain standing. Railroad rails bent; bridges destroyed. Broad fissure in ground.
		XII. Virtually total destruction. Waves seen on ground. Objects thrown into the air.

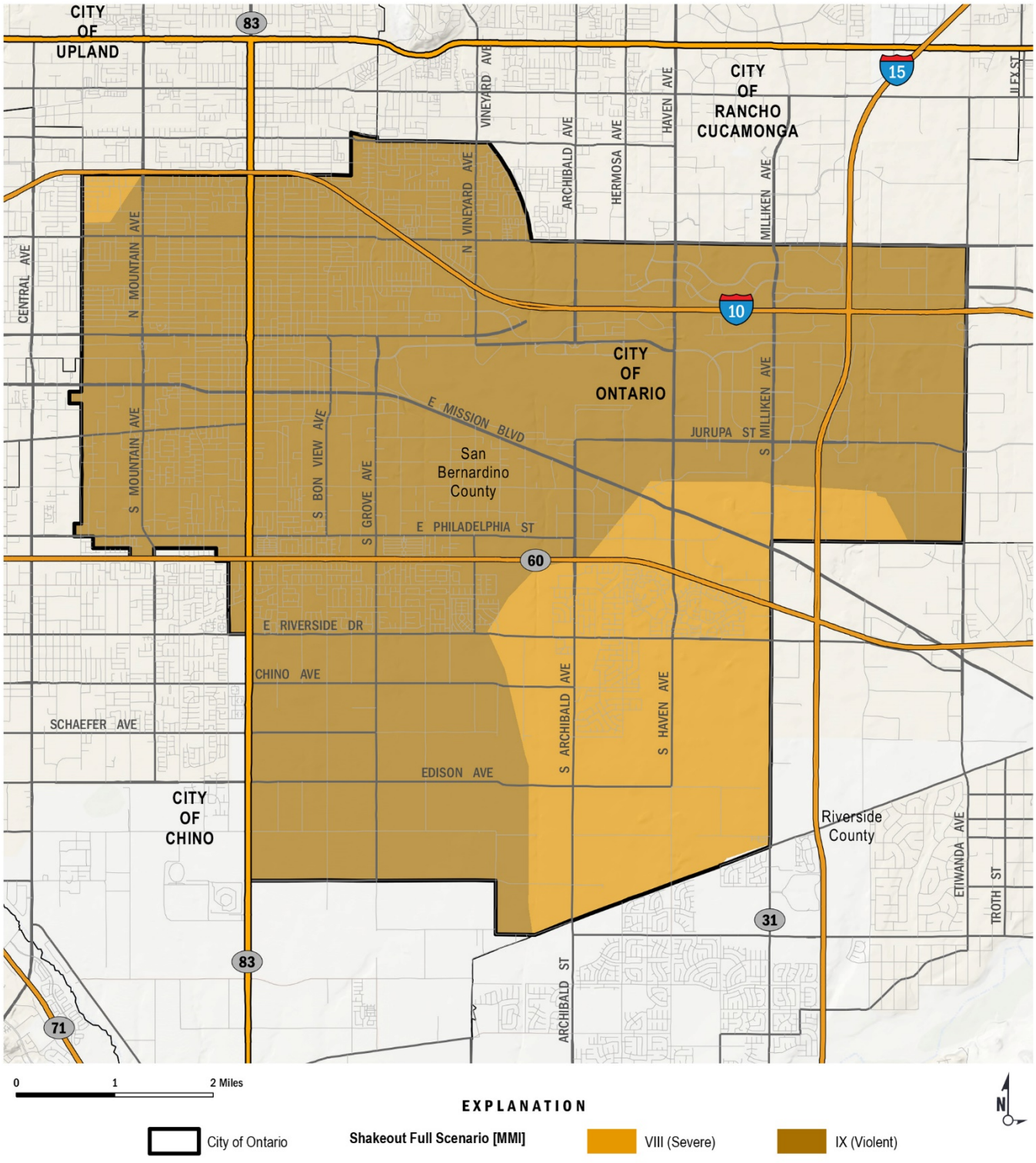


Figure 4-19: Shakeout Full Scenario

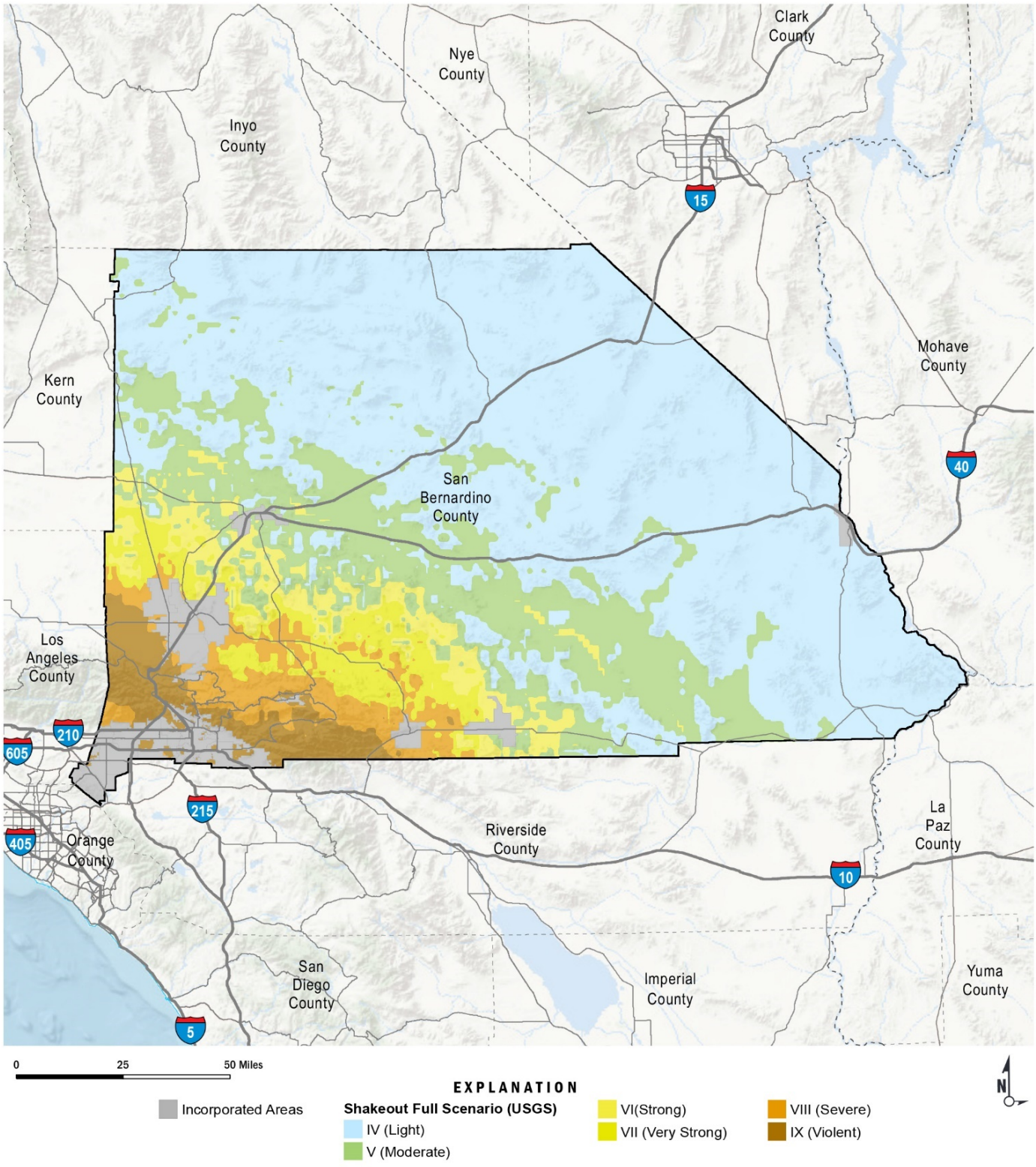


Figure 4-20: Great Shakeout Scenario MMI Classes

4.6.5 Frequency / Probability of Future Occurrences

While earthquakes occur less frequently than other primary natural hazard events, they have accounted for the greatest combined losses (deaths, injuries, and damage costs) in disasters since 1950 in California and have the greatest catastrophic disaster potential (Cal EMA, 2010).

The USGS estimates that the probability of an earthquake occurring over the next 30 Years in the Southern California with a magnitude of 6.7 or greater is 93 percent. Table 4-9 from the USGS lists Average time between earthquakes in the Southern California region together with the likelihood of having one or more such earthquakes in the next 30 years (starting from 2014). "Readiness" indicates the factor by which likelihoods are currently elevated, or lower, because of the length of time since the most recent large earthquakes. The values from the USGS include aftershocks. It is important to note that actual repeat times will exhibit a high degree of variability, and will almost never exactly equal the average listed in the table.

Table 4-9: Southern California Region Earthquake Probability

Magnitude (greater than or equal to)	Average repeat time (years)	30-year likelihood of one or more events	Readiness
5	.7	100%	1.0
6	2.3	100%	1.0
6.7	12	93%	1.0
7	25	75%	1.1
7.5	87	36%	1.2
8	522	7%	1.3

Source: USGS UCERF3: A New Earthquake Forecast for California's Complex Fault System FS 2015-3309

Uniform California Earthquake Forecasts (UCERF) estimated the likelihood that California will experience a magnitude 8 or larger earthquake in the next 30 years has increased from about 4.7% in 2007 (UCERF23F3F[2]) to about 7.0% for the thirty-year duration starting in 2014 (UCERF34F4F[3]). Several of the major Southern California faults have a high probability of

[2] USERF2 = 2008 California Earthquake Probabilities. In April 2008, scientists and engineers released a new earthquake forecast for the State of California called the UCERF. Compiled by USGS, Southern California Earthquake Center (SCEC), and the California Geological Survey (CGS), with support from the California Earthquake Authority, it updates the earthquake forecast made for the greater San Francisco Bay Area by the 2002 Working Group for California Earthquake Probabilities.

[3] UCERF3 = 2014 California Earthquake Probabilities. UCERF3 is the first type of model, representing the latest earthquake-rupture forecast for California. It was developed and reviewed by dozens of leading scientific experts from the fields of seismology, geology, geodesy, paleoseismology, earthquake physics, and earthquake engineering. As such, it represents the best available science with respect to authoritative estimates of the magnitude, location, and likelihood of potentially

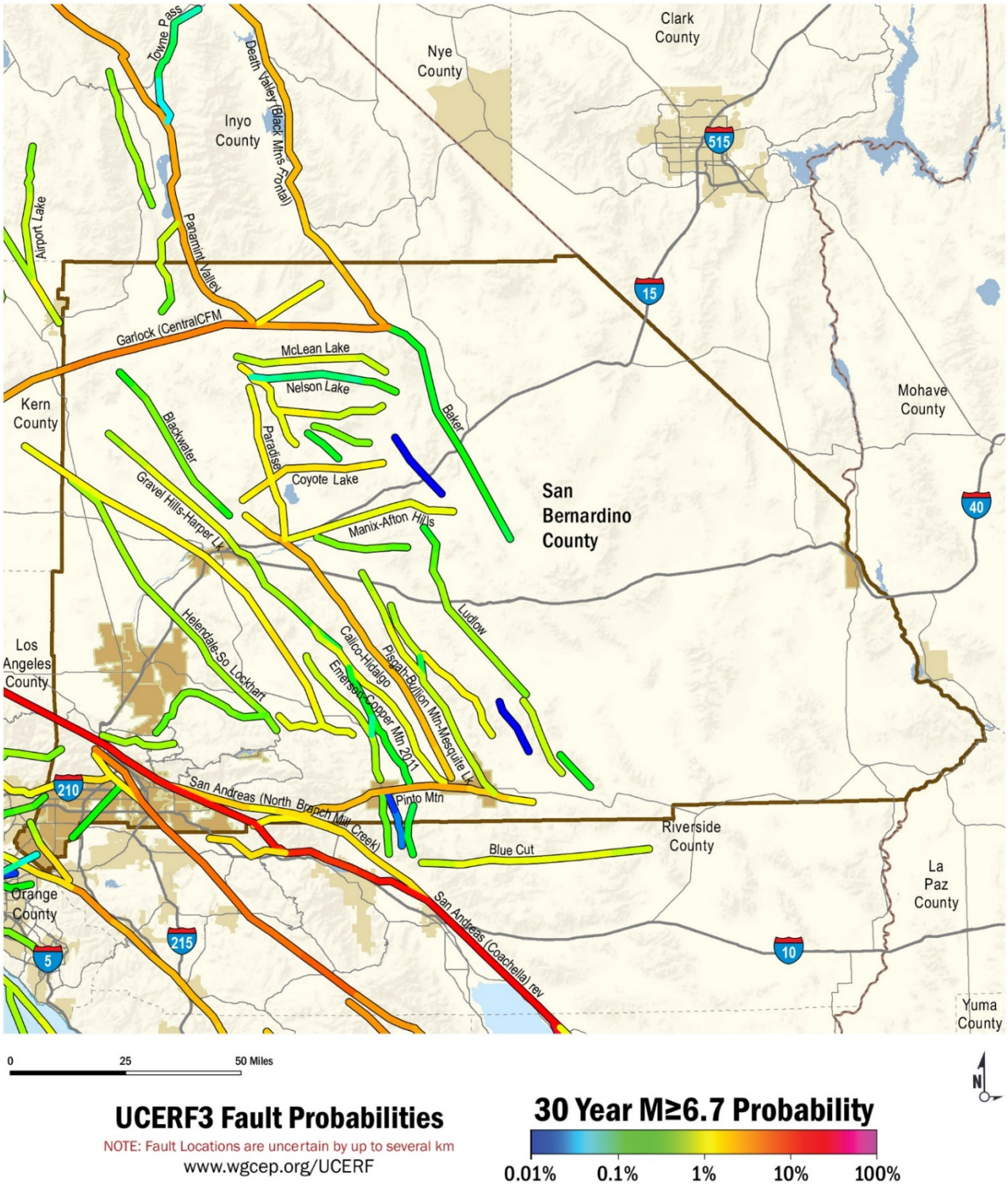


Figure 4-21: UCERF3 Fault Probabilities

damaging earthquakes throughout the state (further background on these models, especially with respect to ingredients, can be found in U.S. Geological Survey Fact Sheet 2008–3027, http://pubs.usgs.gov/fs/2008/3027/)

experiencing a Magnitude 6.7 or greater earthquake within the next 30 years (Figure 9-2); 59% probability of a M6.7 or greater on the Southern San Andreas Fault, 31% probability on the San Jacinto Fault, and 11% probability on the Elsinore Fault. These probabilities were determined by the USGS and CGS in a 2008 study (2007 Working Group on California Earthquake Probabilities, 2008, The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2): U.S. Geological Survey Open-File Report 2007-1437 and California Geological Survey Special Report 203 [http://pubs.usgs.gov/of/2007/1437/]).

Figure 4-21 shows the locations of major faults in Southern California, including the four (4) major faults in relation to San Bernardino County region. These faults are the Southern San Andreas, the San Jacinto, the Elsinore, and the Garlock Faults. There are also many smaller faults within San Bernardino County capable of producing significant earthquakes. However, these four faults are considered by the United States Geological Survey (USGS) and the California Geological Survey (CGS) to be the most dangerous in the County. (California Geological Survey Special Publication 42, Interim Revision 2007, "Fault-Rupture Hazard Zones in California" - Alquist-Priolo Earthquake Fault Zoning Act).

4.6.6 Goals

S1 Minimized risk of injury, loss of life, property damage and economic and social disruption caused by earthquake-induced and other geologic hazards.

4.6.7 Policies

S1-1 *Implementation of Regulations and Standards*. We require that all new habitable structures be designed in accordance with the most recent California Building Code adopted by the City, including provisions regarding lateral forces and grading.

S1-2 *Entitlement and Permitting Process.* We follow state guidelines and the California Building Code to determine when development proposals must conduct geotechnical and geological investigations.

S1-3 *Continual Update of Technical Information*. We maintain up-to-date California Geological Survey seismic hazard maps.

S1-4 *Seismically Vulnerable Structures*. We conform to state law regarding unreinforced masonry structures.

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4.7 High Winds

Severe wind storms pose a significant risk to life and property in Ontario by creating conditions that disrupt essential systems such as public utilities, telecommunications, and transportation routes. High winds can and do occasionally cause tornado-like damage to local homes and businesses. Severe windstorms can present a very destabilizing effect on the dry brush that covers local properties and urban wildland interface areas. High winds can have destructive impacts, especially to trees, power lines, and utility services.

4.7.1 Regulatory Environment

City of Ontario has adopted the 2013 California Building Standards Code to regulate development in areas at risk.

Figure 4-22: Ontario is prone to wildfires associated with high "Santa Ana Winds".

Severe windstorms can pose a significant risk to property and life in the region by creating conditions that disrupt essential systems such as public utilities, telecommunications, and transportation routes. High winds, including Santa Ana winds, can cause damage to homes, businesses, landscaping, public property and utilities, and pose threats to public safety, including accelerating a fire. The alluvial sand that underlies the majority of Ontario is generally granular, poorly consolidated, and very susceptible to erosion. In strong winds this sand can impact property, air quality and visibility.

4.7.2 Past Occurrences

Each year there is a high probability that Ontario will be affected by high winds coming down the local canyons and the Cajon Pass.

While the effects of Santa Ana Winds are often overlooked, it should be noted that in 2003, two deaths in Southern California were directly related to the fierce condition. A falling tree struck one woman in San Diego. The second death occurred when a passenger in a vehicle was hit by a flying pickup truck cover launched by the Santa Ana Winds.

The following Santa Ana wind events were featured in news resources during 2003:

January 6, 2003
OC Register

"One of the strongest Santa Ana windstorms in a decade toppled 26 power poles in Orange early today, blew over a mobile derrick in Placentia, crushing two vehicles, and delayed Metrolink rail service." This windstorm also knocked out power to thousands of people in northeastern Orange County.

January 8, 2003
CBSNEWS.com

"Santa Ana's roared into Southern California late Sunday, blowing over trees, trucks and power poles. Thousands of people lost power."

March 16, 2003
Dailybulletin.com

Fire Officials Brace for Santa Ana Winds - - "The forest is now so dry and so many trees have died that fires, during relatively calm conditions, are running as fast and as far as they might during Santa Ana Winds. Now the Santa Ana season is here.

Combine the literally tinder dry conditions with humidity in the single digits and 60- 80 mph winds, and fire officials shudder."

The following is a glimpse of some major Santa Ana wind/windstorm events to hit the local area:

Major Windstorms / Santa Ana Wind Events
Riverside, San Bernardino and Orange County Area from 1961- 2011

Date Location and Damage

November 5-6, 1961 Santa Ana winds. Fire in Topanga Canyon

February 10-11,1973 Strong storm winds:. 57 mph at Riverside, 46 Newport Beach. Some 200 trees uprooted in Pacific Beach alone

October 26-27, 1993 Santa Ana winds. Fire in Laguna Hills

October 14, 1997 Santa Ana winds: gusts 87 mph in central Orange County. Large fire in Orange County

December 29, 1997 Gusts 60+ mph at Santa Ana

March 28-29, 1998 Strong storm winds in Orange County: sustained 30-40 mph. Gust 70 mph at Newport Beach, gust 60 Huntington Beach. Trees down, power out, and damage across Orange and San Diego Counties. 1 illegal immigrant dead in Jamul.

September 2, 1998 Strong winds from thunderstorms in Orange County with gusts to 40mph. Large fires in Orange County

December 6, 1998 Thunderstorm in Los Alamitos and Garden Grove: gust 50-60 mph called "almost a tornado" house and tree damage in Hemet.

March 5-6, 2000 Strong thunderstorm winds at the coast: gust 60 mph at Huntington Beach property damage and trees downed along the coast

April 1, 2000 Santa Ana winds: gust 93 mph at Mission Viejo, 67 Anaheim Hills

December 25-26, 2000 Santa Ana winds: gust 87 mph at Fremont Canyon. Damage and injuries in Ontario, Mira Loma, Orange and Riverside Counties

February 13, 2001 Thunderstorm gust to 89 mph in East Orange

October 14 and 15, 2008 prolonged Santa Ana Wind event trees down, truck blown over in Ontario

November 01, 2011 Santa Ana Wind event Trees down Trucks blown off freeway in Ontario

December 01, 2011 Santa Ana Wind event Trees down trucks blown over in Ontario

4.7.3 Location/Geographic Extent

The entire city of Ontario is at risk for these high winds.

4.7.4 Magnitude/Severity

A windstorm event in the region can range from short term microburst activity lasting only minutes to a long duration Santa Ana wind condition that can last for several days as in the case of the January 2003 and October 2008 Santa Ana wind events. Windstorms in the City of Ontario area can cause extensive damage including heavy tree stands, structures, road and highway infrastructure, and critical utility facilities. The map shows clearly the direction of the Santa Ana winds as they travel from the stable, high-pressure weather system called the Great Basin High through the canyons and towards the low-pressure system off the Pacific.

Clearly the area of the City of Ontario is in the direct path of the ocean-bound Santa Ana winds. With an analysis of

the high wind and tornado events depicted in the “Local History” section, we can deduce the common windstorm impact areas including impacts on life, property, utilities, infrastructure and transportation. Additionally, if a windstorm disrupts power to local residential communities, the American Red Cross and City resources might be called upon for care and shelter duties. Displacing residents and utilizing City resources for shelter staffing and disaster cleanup can cause an economic hardship on the community.

Location and Geographic Extent

The entire city of Ontario is at risk for these high winds. The National Weather Service uses the Beaufort Scale to measure the magnitude and extent of the wind hazard from 0 to 12. In the Ontario area during wind events the Beaufort Scale can range from 8 to 12 on a regular basis.

	Wind Speed	Description	Waves
1	1 - 3	Light airs	Ripples.
2	4 - 6	Light breeze	Small wavelets
3	7 - 10	Gentle breeze	Occasional crests.
4	11- 16	Moderate breeze	Frequent white horses
5	17- 21	Fresh breeze	Moderate waves, many white crests.
6	22 - 27	Strong breeze	Large waves, white foam crests.
7	28 - 33	Near gale	4m waves. Sea heaps up, spray, breaking waves, foam blows in streaks.
8	34 - 40	Gale	Moderately high waves (5.5m), breaking crests. Foam blown in streaks.
9	41 - 47	Severe gale	High waves (7m), spray affects visibility. Dense streaks of foam along the direction of wind; crests of waves begin to topple and roll over.
10	48 - 55	Storm	Very high waves (9m) long breaking crests
11	55 - 63	Violent Storm	11m waves Sea covered in foam. Visibility affected.
12	64 +	Hurricane	11m+ waves The air is filled with foam and spray; sea completely white with driving spray; visibility very seriously affected

4.7.4.1 Life and Property

Based on the history of the region, windstorm events can be expected, perhaps annually, across widespread areas of the city which can be adversely impacted during a windstorm event. This can result in the involvement of City of Ontario emergency response personnel during a wide ranging windstorm or microburst tornadic activity. Both residential and commercial structures with weak reinforcement are susceptible to damage. Wind pressure can create a direct and frontal assault on a structure, pushing walls, doors, and windows inward. Conversely, passing currents can create lift suction forces that pull building components and surfaces outward. With extreme wind forces, the roof or entire building can fail causing considerable damage.

Debris carried along by extreme winds can directly contribute to loss of life and indirectly to the failure of protective building envelopes, siding, or walls. When severe windstorms strike a community, downed trees, power lines, and damaged property can be major hindrances to emergency response and disaster recovery.

4.7.4.2 Utilities

Historically, falling trees have been the major cause of power outages in the region. Windstorms such as strong microbursts and Santa Ana Wind conditions can cause flying debris and downed utility lines. For example, tree limbs breaking in winds of only 45 mph can be thrown over 75 feet. As such, overhead power lines can be damaged even in relatively minor windstorm events. Falling trees can bring electric power lines down to the pavement, creating the possibility of lethal electric shock. Rising population growth and new infrastructure in the region creates a higher probability for damage to occur from windstorms as more life and property are exposed to risk.

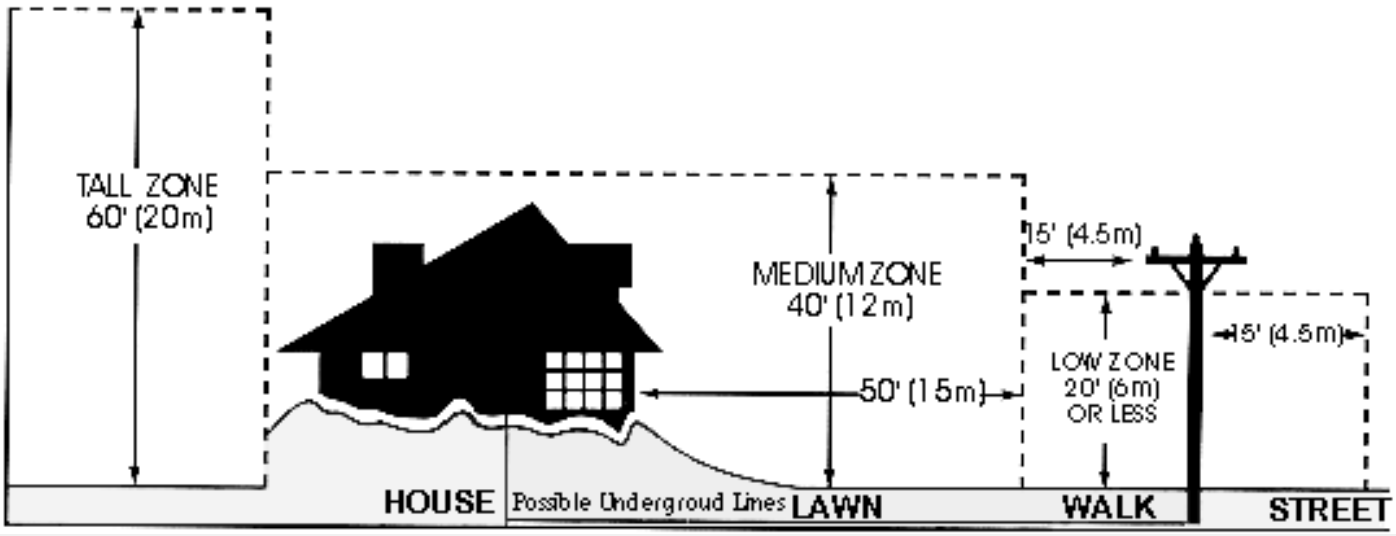

Figure 4-23: Windstorm Zones

4.7.4.3 Infrastructure

Windstorms can damage buildings, power lines, and other property and infrastructure due to falling trees and branches. During wet winters, saturated soils cause trees to become less stable

and more vulnerable to uprooting from high winds. Windstorms can result in collapsed or damaged buildings or blocked roads and bridges, damaged traffic signals, streetlights, and parks, among others. Roads blocked by fallen trees during a windstorm may have severe consequences to people who need access to emergency services. Emergency response operations can be complicated when roads are blocked or when power supplies are interrupted. Industry and commerce can suffer losses from interruptions in electric services and from extended road closures. They can also sustain direct losses to buildings, personnel, and other vital equipment. There are direct consequences to the local economy resulting from windstorms related to both physical damages and interrupted services.

4.7.4.4 Increased Fire Threat

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

4.7.4.5 Transportation

Windstorm activity can have an impact on local transportation in addition to the problems caused by downed trees and electrical wires blocking streets and highways. During periods of extremely strong Santa Ana winds, major highways can be temporarily closed to truck and recreational vehicle traffic. However, typically these disruptions are not long lasting, nor do they carry a severe long term economic impact on the region.

4.7.5 Frequency/Probability of Future Occurrences

High winds can occur at any time and Santa Ana winds come primarily each year from August to December, but with climate change those months can vary each year.

4.7.6 Goals

S5 Reduced risk of injury, property damage and economic loss resulting from windstorms and wind-related hazards.

4.7.7 Policies

S5-1 *Backup Power in Critical Facilities*. We require backup power be maintained in critical facilities.

S5-2 *Dust Control Measures*. We require the implementation of Best Management Practices for dust control at all excavation and grading projects.

S5-3 *Grading in High Winds*. We prohibit excavation and grading during strong wind conditions, as defined by the Building Code.

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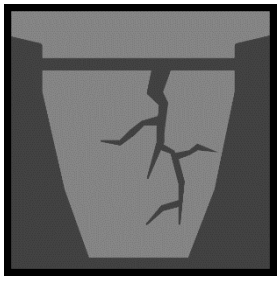
4.8 Dam Failure Hazard Profile



A dam failure is usually the result of neglect, poor design, and/or structural damage caused by a major event such as an earthquake. When a dam failure occurs, a gigantic quantity of water is suddenly released, destroying infrastructure and flooding the area downstream of the dam (ABAG, 2011).

Dams are man-made structures built for a variety of uses. Uses include agriculture, flood protection, power generation, recreation, and water supply. Dam failure can occur with little warning. As outlined by FEMA, dam failure can occur due to one or a combination of the following reasons:

- Overtopping caused by floods that exceed the capacity of the dam.
- Deliberate acts of sabotage to the dam.
- Structural failure of materials used in dam construction.
- Movement and/or failure of the foundation supporting the dam.
- Settlement and cracking of concrete in the dam.
- Piping and internal erosion of soil in the dams.
- Inadequate maintenance and upkeep of the dam.

The San Antonio Dam above Upland is the only dam that could affect the City of Ontario. A large release event from San Antonio Dame would cause extensive property damage and temporary displacement of hundreds of households. Regulatory Environment

Dam regulatory requirements at a federal, state, and local level are critical for the safeguarding of agriculture, economy, power supply, and quality of life in the City. At the federal level, FEMA is working to protect from dam failure through the National Dam Safety Program (NDSP). The Water Resources and Development Act of 1996 formally established the NDSP. The NDSP is a partnership of the states, federal agencies, and other stakeholders to encourage individual and community responsibility for dam safety. The Dam Safety and Security Act of 2002, signed into law on December 2, 2002, reauthorized the NDSP for 4 more years and added enhancements to the 1996 Act that are designed to safeguard dams against terrorist attacks (FEMA, 2010).

Since 1972, the USACE has maintained the National Inventory of Dams (NID). Dams included in the NID are either greater than 25 feet high, hold more than 50 acre-feet of water, or are considered a significant hazard if they were to fail. Dams are classified based on the severity or magnitude of the potential devastation and losses of human life, economic, and environmental resources. Dam hazard classifications are defined as follows:

- High Hazard – loss of one human life is likely if a dam failure should occur.
- Significant Hazard – possible loss of human life and likely significant property or environmental destruction if a dam failure should occur.
- Low Hazard – no probable loss of human life and low economic, and/or environmental losses if a dam failure should occur.

At a state level, laws pertaining to the California dam safety program were originally adopted in 1929. Under this program, the DWR's Division of Safety of Dams (DSoD) independently reviews and evaluates designs of new dams. DWR performs

frequent inspections of dams under construction and of those recently completed to verify compliance with approved plans and specifications.

In the State of California, a number of governmental bodies, specifically the California Emergency Management Agency (Cal EMA) and the California Department of Water Resources (DWR), Division of Safety of Dams (DOSOD), manage the state dam safety program. Within the State, Title 19, Public Safety, Division 2 (Office of Emergency Services), Chapter 2 (Emergencies and Major Disaster), Subchapter 4 (Dam Inundation Mapping Procedures) of the California Code of Regulations (CCR) codifies the mapping criteria for dam owners and operators, specifying the mapping scope and mapping notification requirements. Dam owners are required to submit both a technical report and emergency inundation map to Cal EMA when one of the following applies:

- "Notice of Application" is filed with DWR, DOSOD; or,
- A dam is under construction (new and rehabilitation); or,
- A waiver previously granted by the Cal EMA is no longer applicable; or,
- Changes in land use and or drainage ways within the inundation zone.

The CCR identifies the scope of dam inundation mapping, which is to include the following:

- Delineated lateral boundaries and terminations of the inundation area.
    - The boundary is terminated where floodwaters become less than one (1) foot above the elevation existing before the dam failure and the water velocity is less than 8.8 feet per second.
    - Alternatively, the boundary at which the inundation area may be terminated could be an existing body of water or channel in which dam waters are discharged, provided the dam breach flood discharge does not increase the water elevation by greater than one (1) foot above the flood stage that would have occurred under non-breach conditions or cause additional downstream cumulative impacts.
- Cross-sections located along the floodway at appropriate intervals indicating the following information:
    - Sequential cross-section number,
    - Distance from dam,
    - Flood-wave arrival time,
    - Flood-wave maximum elevation,
    - De-flood time (the amount of time it would take for conditions to return to pre-flood conditions) and,
    - Peak flow.

According to the CCR, approval of an inundation map may be revoked when the inundation map no longer meets the requirements and is no longer an accurate emergency planning document. Upon notification of noncompliance by Cal EMA, the dam owner is required to submit a new and compliant inundation map and technical study within 180 days.

Under the regulation of DSoD, dam owners and operators in San Bernardino County are required to routinely inspect their facilities. These inspections and evaluations will alert owners and operators to potential dam failures and allow immediate action to remedy the problem.

4.8.1 Past Occurrences

There has been no dam failures in the Ontario area.

4.8.2 Location/Geographic Extent

The dam inundation area is primarily the west side of Ontario as shown in Figure 4-24.

4.8.3 Magnitude/Severity

Since 1972, the State has required inundation maps for most dams, showing those areas within the potential dam failure inundation zone. The area affected will be the downtown area and residential of the City of Ontario with a small part of the commercial area in the south.

Important to note: Pursuant to Government Code Section 8589.4, which is commonly referred to as the Potential Flooding - Dam Inundation Act (the "PFDI Act"), inundation maps must be prepared, delivered and approved by the OES. These maps show areas of potential flooding in the event of sudden or total failure of any dam, the failure of which would result in death or personal injury.

4.8.1 Frequency/Probability of Future Occurrences

The probability of a dam failure is extremely rare. The San Antonio Dam only has water behind it in the rainy months. The water is usually passed through on the way to the Prado Dam area in Chino. Even if the dam was full and a complete failure occurred there are 2 below ground freeways (the 10 and the 210) which would channel the water flows around Ontario. The impact to Ontario would be minimal at worst.

4.8.2 Goals

S2 Minimized risk of injury, loss of life, property damage and economic and social disruption caused by flooding and inundation hazards.

4.8.3 Policies

S2-1*Entitlement and Permitting Process*. We follow State guidelines and building code to determine when development proposals require hydrological studies prepared by a State-certified engineer to assess the impact that the new development will have on the flooding potential of existing development down-gradient.

S2-2 *Flood Insurance*. We will limit development in flood plains and participate in the National Flood Insurance Program.

S2-3 *Facilities that Use Hazardous Materials*. We comply with state and federal law and do not permit facilities using, storing, or otherwise involved with substantial quantities of onsite hazardous materials to be located in the 100 year flood zone unless all standards of elevation, flood proofing and storage have been implemented to the satisfaction of the Building Department.

S2-4 *Prohibited Land Uses*. We prohibit the development of new essential and critical facilities in the 100-year floodplain.

S2-5 *Storm Drain System*. We maintain and improve the storm drain system to minimize flooding

S2-6 *Use of Flood Control Facilities*. We encourage joint use of flood control facilities as open space or other types of recreational facilities.

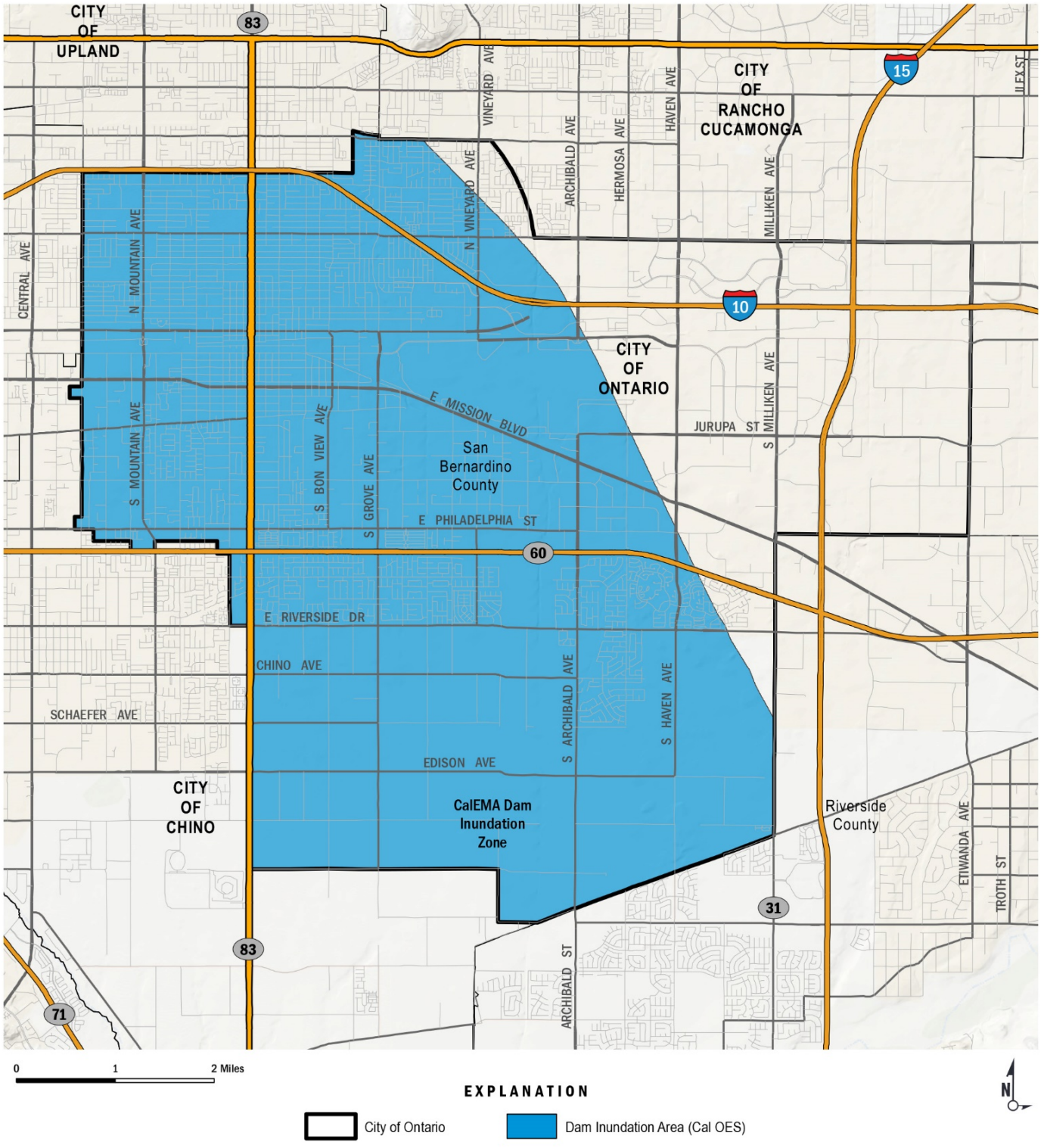


Figure 4-24: Dam Inundation Areas in Ontario

4.9 Climate Change

Climate change refers to any distinct change in measures of climate lasting for a long period of time, more specifically major changes in temperature, rainfall, snow, or wind patterns. Climate change may be limited to a specific region, or may occur across the whole Earth. Climate change may result from:

- Natural factors (e.g., changes in the Sun's energy or slow changes in the Earth's orbit around the Sun);
- Natural processes within the climate system (e.g., changes in ocean circulation); and
- Human activities that change the atmosphere's make-up (e.g., burning fossil fuels) and the land surface (e.g., cutting down forests, planting trees, building developments in cities and suburbs, etc.).

The effects of climate change are varied: warmer and more varied weather patterns, melting ice caps, and poor air quality, for example. As a result, climate change impacts a number of natural hazards.

The 2013 State of California Multi-Hazard Mitigation Plan stated that climate change is already affecting California. Sea levels have risen by as much as seven inches along the California coast over the last century, increasing erosion and pressure on the state's infrastructure, water supplies, and natural resources. The State has also seen increased average temperatures, more extreme hot days, fewer cold nights, a lengthening of the growing season, shifts in the water cycle with less winter precipitation falling as snow, and both snowmelt and rainwater running off sooner in the year. In addition to changes in average temperatures, sea level, and precipitation patterns, the intensity of extreme weather events is also changing.

The City of Ontario's highest risk is drinking water short fall, but Ontario in 2014 put a Community Climate Change Action Plan together to assist in reducing the carbon footprint of the city and reduce the greenhouse gases. This followed a County wide EIR by SANBAG in 2013 for greenhouse gas reduction

4.9.1 Regulatory Environment

The City of Ontario has adopted the following policies to respond to Climate Change Issues

- 2014 Community Climate Change Action Plan
- 2013 SANBAG Greenhouse Gas Reduction EIR
- 2010 Ontario Plan
- 2009 Emergency Water Conservation Ordinance

4.9.1.1 The Sustainable Communities and Climate Protection Act of 2008

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) looks to reduce GHG emissions through coordinated transportation and land use planning with the goal of more sustainable communities. Regional targets are established for GHG emissions reductions from passenger vehicle use by the sustainable communities strategy (SCS) established by each metropolitan planning organization (MPO). The SCS is an integral part of the regional transportation plan (RTP) and contains land use, housing, and transportation strategies to meet GHG reductions targets. In San Bernardino County, the South Coast Air Quality Management District facilitates compliance with the federal Clean Air Act and implements the state's air quality program.

The Office of Planning and Research's General Plan Guidelines and SB 375 builds upon Assembly Bill 162 (flood protection) and Senate Bill 1241 (fire protection) and supports Safeguarding California implementation.

SB 375 also supports Assembly Bill 2140 which requires that a City/County General Plan contains a safety element in addition to a Hazard Mitigation Plan. AB 2140 also requires a vulnerability assessment, adaptation goals, policies and objectives, and a set of feasible implementation measures.

4.9.1.2 California Adaptation Planning Guide (APG)

The State of California has been taking action to address climate change for over 20 years, focusing on both greenhouse gas emissions reduction and adaptation. The California Adaptation Planning Guide (APG) continues the state's effort by providing guidance and support for communities addressing the unavoidable consequences of climate change.

Based on upon specific factors, 11 Climate impact regions were identified. Some of the regions were based on specific factors particularly relevant to the region. As illustrated in Figure 4-25 San Bernardino County is located in the Desert Region.

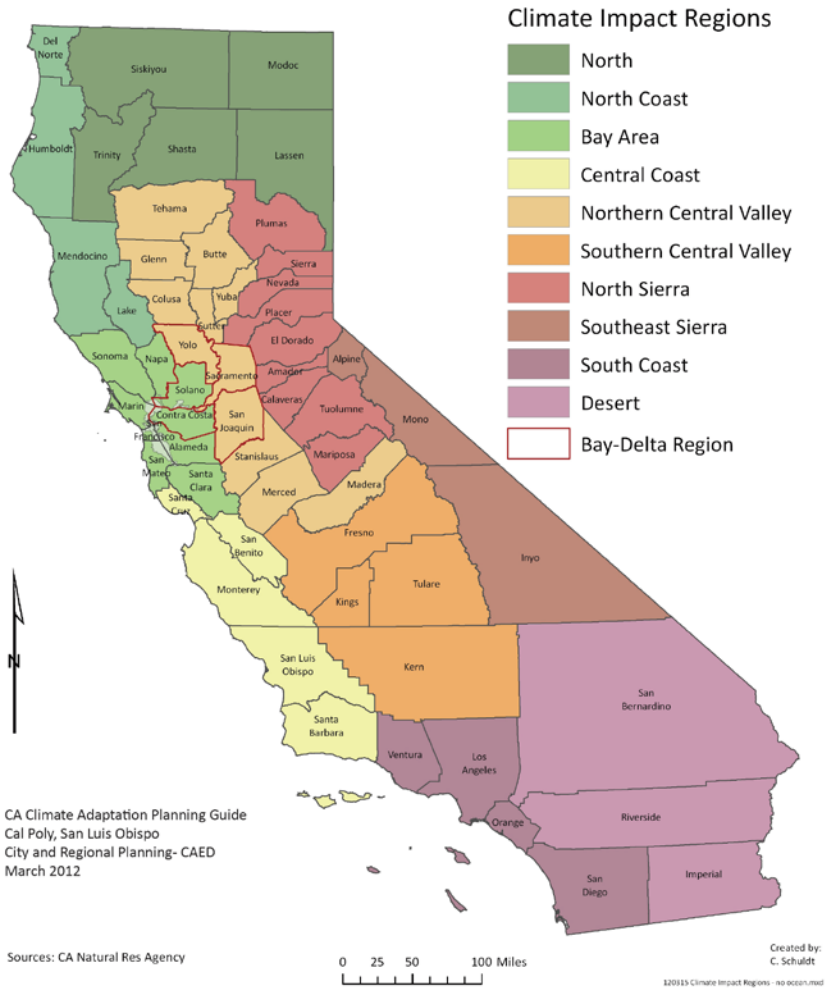


Figure 4-25: Climate Impact Regions

The Desert is a heavily urbanized inland region (4.3+ million people) made up of sprawling suburban development in the west near the South Coast region and vast stretches of open, largely federally owned desert land to the east. Prominent cities within the desert portion include Palm Springs (44,500+) and El Centro (42,500+). The region's character is defined largely by the San Gabriel Mountains, San Gorgonio Mountains, San Jacinto Mountains, and smaller inland mountains reaching through the desert to the Colorado River, which borders the region on the east. Communities in the Desert region should consider evaluating the following climate change impacts:

- Reduced water supply
- Increased temperature
- Reduced precipitation
- Diminished snowpack
- Wildfire risk
- Public health and social vulnerability
- Stress on special-status species

4.9.2 Agencies

- Ontario Fire Department
- Santa Ana Regional Water Quality
- South Coast Air Quality
- San Bernardino County Fire Environmental Health
- San Bernardino County Agriculture
- California Environmental Protection Agency
- Governor's Office of Planning and Research
- California Air Resources Board
- California Business, Consumer Services, and Housing Agency
- California Government Operations Agency
- California Natural Resources Agency
- California Department of Public Health
- California Emergency management Agency, Cal-EMA
- California Transportation Agency
- California Energy Commission
- California Public Utilities Commission
- California Department of Food and Agriculture
- California Department of Forestry and Fire Protection
- California Department of Fish and Wildlife
- California Department of Transportation
- California Department of Water Resources
- California Department of Resources Recycling and Recovery
- California State Water Resources Control Board
- Federal Environmental Protection Agency EPA
- Federal Department of Energy DOE
- Federal Department of Interior
- Federal Department of Agriculture

- NOAA National Oceanic and Atmospheric Administration

4.9.3 Past Occurrences

Climate change has never been directly responsible for any declared disasters. Past flooding, wildfire, levee failure, and drought disasters may have been exacerbated by climate change, but it is impossible to make direct connections to individual disasters. In addition, unlike earthquake and floods that occur over a finite time period, climate change is an on-going hazard, the effects of which some are already experiencing. Other effects may not be seriously experienced for decades, or may be avoided altogether by mitigation actions taken today.

According to the California State Hazard Mitigation Plan (SHMP), the worst single heat wave event in California occurred in Southern California in 1955, when an eight-day heat wave resulted in 946 deaths. The July 2006 heat wave in California caused approximately 140 deaths over a 13-day period.

At this time Ontario has been able to respond to climate change issues by enforcing water conservation during periods of drought and the utilization of both public and private facilities as cooling centers during heat waves.

4.9.4 Location/Geographic Extent

The effects of climate change are not limited by geographical borders. San Bernardino County, the State of California, the United States, and the rest of the world are all at risk to climate change. As such, the entire County is at risk to the effects of climate change.

Figure 4-26 and Figure 4-27 provide Cal Adapt[4] modeled decadal July high temperature averages for 2010 and 2090. These figures provide current decade-long July temperature averages and possible annual high heating trends for the remaining portion of the century. The data presented in the figures represent a "projection" of potential future climate scenarios, they are not predictions. These figures illustrate how the climate may change based on a variety of different potential social and economic factors. The visualizations are comprised of average values from Coupled Climate model 2.1 (GFDL), Community Climate System Model Version 3 (CCSM3), Coupled Global Climate Model Version 3 (CNRM) and Parallel Climate Model 1 (PCM1). During the next few decades, scenarios project average temperature to rise between 1° and 2.3°F; however, the projected temperature increases begin to diverge at mid-century so that, by the end of the century, the temperature increases projected in the higher emissions scenario (A2) are approximately twice as high as those projected in the lower emissions scenario (B1). Customizable maps can be viewed at http://cal-adapt.org/temperature/decadal/

[4] Cal-Adapt has been funded to provide access to data and information that has been produced by the State's scientific and research community. The data available in this site offer a view of how climate change might affect California at the local level.

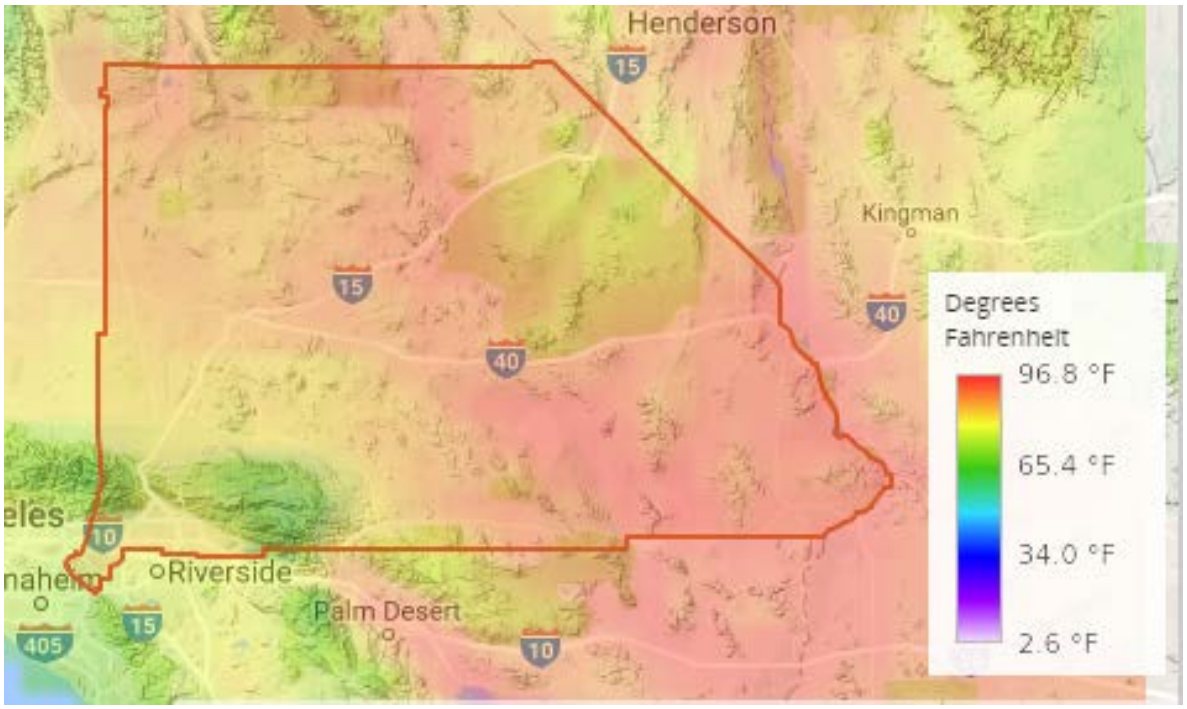


Figure 4-26: July Decadal Average High Temperature Map; 2010

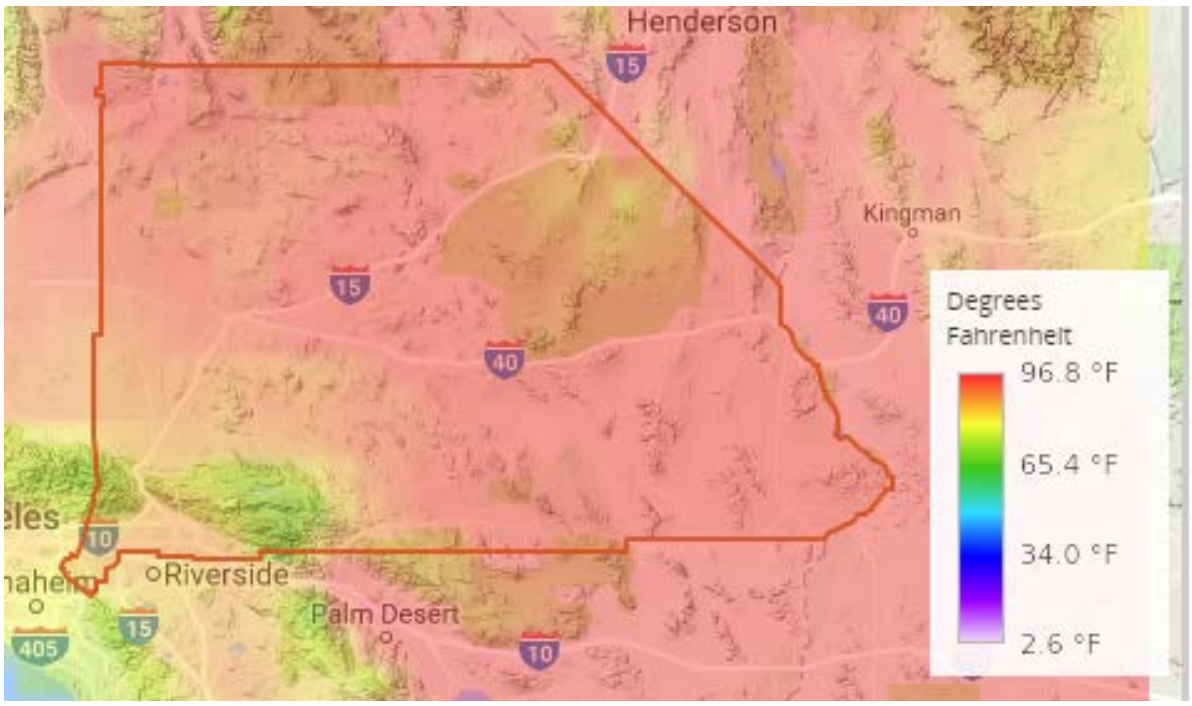


Figure 4-27: July Decadal Average High Temperature Map; 2090

4.9.5 Magnitude/Severity

Ontario has identified that the sick, elderly and the young are at risk for climate change exposures.

The California Adaptation Planning Guide has calculated projections for changes in temperature, precipitation, heat waves, snowpack and wildfire risk in the desert area, as shown in Table 4-10. Hotter, drier conditions are expected to exist in the desert area, increasing the risk for other natural hazards.

Table 4-10: From APG: Table 41. Summary of Cal-Adapt Climate Projections for the Desert Region

Effect	Ranges
Temperature Change, 1990-2100	January increase in average temperatures: 2°F to 4°F by 2050 and 5°F to 8°F by 2100 July increase in average temperatures: 3°F to 5°F by 2050 and 6°F to 9°F by 2100 (Modeled high temperatures; high carbon emissions scenario)
Precipitation	Generally, annual rainfall will decrease in the most populous areas. Wetter areas like the western part of Riverside and southwestern San Bernardino counties will experience a 2 to 4 inch decline by 2050 and 3.5 to 6 inch decline by the end of the century. Big Bear is expected to lose around 8 inches per year by 2090. Southern Imperial County will have a small decline of about 0.5 inches. The eastern, desert portion of the region will see little to no change in annual rainfall. (CCSM3 climate model; high carbon emissions scenario)
Heat Wave	Heat waves are defined by five consecutive days over temperatures in the 100s over most of the region. Three to five more heat waves will be experienced by 2050, increasing to 12 to 16 in the western parts of the region to more than 18 to 20 in the eastern parts of the region.
Snowpack	March snowpack in the Big Bear area will diminish from the 2.5- inch level of 2010 to 1.4 inches in 2030 and almost zero by 2090. (CCSM3 climate model; high emissions scenario)
Wildfire Risk	Most areas are projected to have the same or slightly increased likelihood of wildfire risk. The major exceptions are the Mecca San Gorgonio and San Jacinto Mountains, where wildfire will be 1.5 and 2.0 times more likely. (GFDL model, high carbon emissions scenario)

Public Interest Energy Research, 2011. Cal-Adapt. Retrieved from http://cal-adapt.org]

The California Climate Adaptation Strategy (CAS), citing a California Energy Commission study, states that "over the past 15 years, heat waves have claimed more lives in California than all other declared disaster events combined." This study shows that California is getting warmer, leading to an increased frequency, magnitude, and duration of heat waves. These factors may lead to increased mortality from excessive heat, as shown in Figure 4-47.

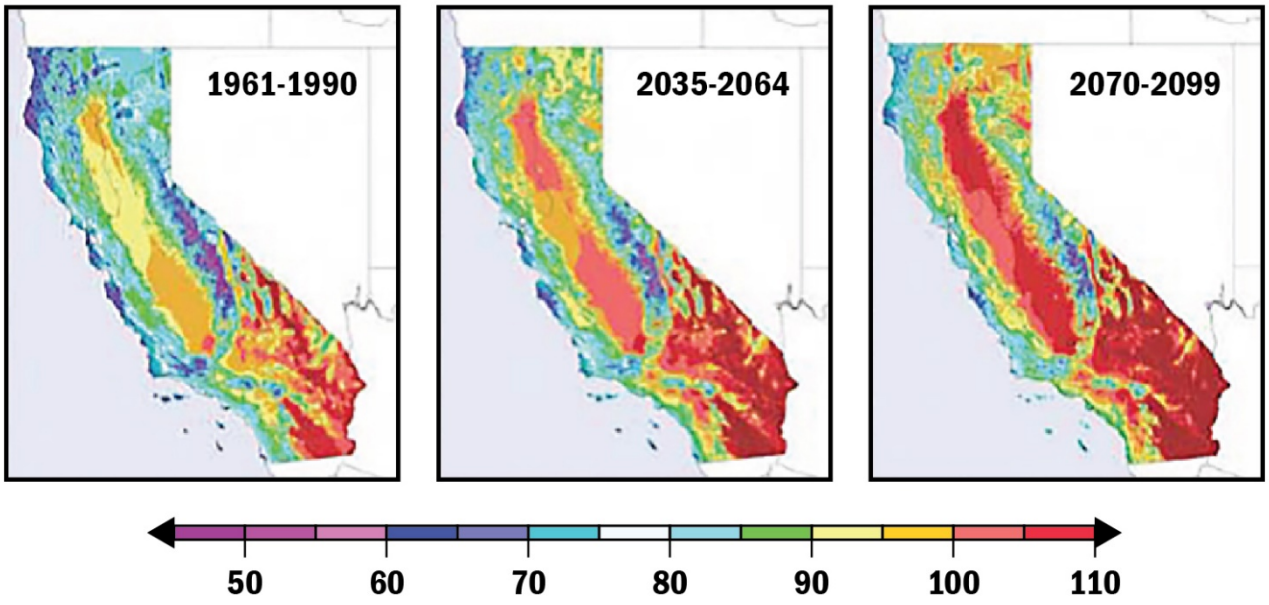


Figure 4-28: California Historical and Projected Temperature Increases - 1961 to 2099

Source: Dan Cayan; California Climate Adaptation Strategy

4.9.6 Frequency/Probability of Future Occurrences

Climate change is one of the few natural hazards where the probability of occurrence is influenced by human action. In addition, unlike earthquake and floods that occur over a finite time period, climate change is an on-going hazard.

The 2009 Climate Adaptation Strategy (CAS) delineated how climate change may impact and exacerbate natural hazards in the future, including wildfires, extreme heat, floods, drought, and levee failure:

- Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in San Bernardino County and the rest of California, which are likely to increase the risk of mortality and morbidity due to heat-related illness and exacerbation of existing chronic health conditions. Those most at risk and vulnerable to climate-related illness are the elderly, individuals with chronic conditions such as heart and lung disease, diabetes, and mental illnesses, infants, the socially or economically disadvantaged, and those who work outdoors.
- The Desert region relies on water from the Colorado River and the State Water Project. Both of these sources begin with mountain snowpack. Climate change will result in drastically reduced supply from these sources. Declining snowpack in the San Gabriel Mountains, San Gorgonio Mountains, and San Jacinto Mountains will lead to permanently diminished local water supply.
- Higher temperatures will melt the snowpack earlier and drive the snowline higher, resulting in less snowpack to supply water to California users.
- Droughts are likely to become more frequent and persistent in the 21st century.
- Intense rainfall events, periodically ones with larger than historical runoff, will continue to affect California with more frequent and/or more extensive flooding.

- Storms and snowmelt may coincide and produce higher winter runoff. Together, these changes will increase the probability of dam and levee failures in the San Bernardino County Flood Control District.
- Warmer weather, reduced snowpack, and earlier snowmelt can be expected to increase wildfire risk through fuel hazards and ignition risks. These changes can also increase plant moisture stress and insect populations, both of which affect forest health and reduce forest resilience to wildfires. An increase in wildfire intensity and extent will increase public safety risks, property damage, fire suppression and emergency response costs to government, watershed and water quality impacts, vegetation conversions and habitat fragmentation.

4.9.7 Planned Development

Ontario has no at-risk areas.

4.9.8 Goals, Policies, and Objectives

The City of Ontario has adopted the following policies to respond to Climate Change Issues

- 2014 Community Climate Change Action Plan
- 2013 SANBAG Greenhouse Gas Reduction EIR
- 2010 Ontario Plan
- 2009 Emergency Water Conservation Ordinance

4.9.9 Implementation Measures

Ontario does not have any at-risk areas for climate change. The City is actively working on reducing its greenhouse gases by implementing the Community Climate Change Action Plan, the 2013 EIR by SANBAG and the 2010 Ontario Plan.

4.10 Terrorism Profile

There is no single, universally accepted definition of terrorism, however, FEMA defines "terrorism" as intentional, criminal, malicious acts. FEMA document 386-7 refers to terrorism specifically as the use of Weapons of Mass Destruction (WMD), including biological, chemical, nuclear, and radiological weapons; arson, incendiary, explosive, and armed attacks; industrial sabotage and intentional hazardous materials releases; and "cyberterrorism."

FEMA developed the Integrated Emergency Management System (IEMS) using an all-hazards approach. While the IEMS was established as an "all-hazard" approach, responding to the threat of terrorism (referred to as counterterrorism) came to be viewed as the responsibility of law enforcement, defense, and intelligence agencies. Furthermore, defensive efforts to protect people and facilities from terrorism (referred to as **antiterrorism**) were generally limited to the government sector, the military, and some industrial interests.

While the term "mitigation" refers generally to activities that reduce loss of life and property by eliminating or reducing the effects of disasters, in the terrorism context it is often interpreted to include a wide variety of preparedness and response actions. For the purposes of this document, the traditional meaning will be assumed; that mitigation refers to specific actions that can be taken to reduce loss of life and property from manmade hazards by "modifying the built environment" or antiterrorism to reduce the risk and potential consequences of these hazards.

4.10.1 Antiterrorism Regulatory Environment

Adopted on February 9th, 2012 and updated on October 1st, 2013, United Facilities Criteria (UFC) 4-010-01 defines the United States Department of Defense's (DoD) minimum antiterrorism standards for both new and existing buildings. The document applies to DoD buildings, National Guard buildings, visitor centers and museums, visitor control facilities and expeditionary structures. Historic preservation compliance for implementation of anti-terrorism standards, philosophy, design strategies and assumptions are all taken into account. Site planning, structural design, architectural design, and electrical and mechanical design are discussed in detail in Appendix B. The document is available to the public and be found online.

4.10.1.1 Counterterrorism Regulatory Environment

After the Waterman Terrorism Incident on December 2nd, 2015 two full time positions with a regional FBI-led terrorist task force (FBI's Joint Terrorism Task Force) were created. These task force officers have the clearance to conduct terrorism investigations in the County. The Task Force includes partners from Homeland Security Investigations (HIS), the San Bernardino Police Department, the San Bernardino County Sheriff's Department, the Riverside County Sheriff's Department, the Ontario Police Department, the Riverside Police Department, the Corona Police Department and the Chino Police Department. For more information regarding the positions, contact the San Bernardino Police Department at (909) 384-5742.

According to the State of California Department of Justice's Anti-terrorism program website, the Anti-terrorism program works with federal, state and local law enforcement agencies to detect, investigate, prosecute, dismantle, prevent and respond to domestic and international terrorist activities.

The State of California Bureau of Security and Investigative Services' Power to Arrest Course includes a Weapons of Mass Destruction (WMD) & Terrorism Awareness section. More information regarding the course can be found in the Bureau of Security and Investigative Services California Code of Regulations. Past Occurrences

There have been two terrorist attacks recorded in San Bernardino County. Table 4-11 describes both attacks.

Table 4-11: Terrorist Attacks in San Bernardino County

Date	Perpetrator Group	Fatalities	Injured	Target Type
3/16/1970	White Extremists	0	1	Government (General)
12/2/2015	Unaffiliated Individuals	16	17	Government (General)

Source: ***Global Terrorism Database***

The state of California has experienced 574 terrorist attacks from 1970-2011 (Integrated United States Security Database (IUSSD): Data on the Terrorist Attacks in the United States Homeland, 1970-2011, 2012). Figure 4-29 shows the types of terrorist attacks in the state of California from 1970 to the present.

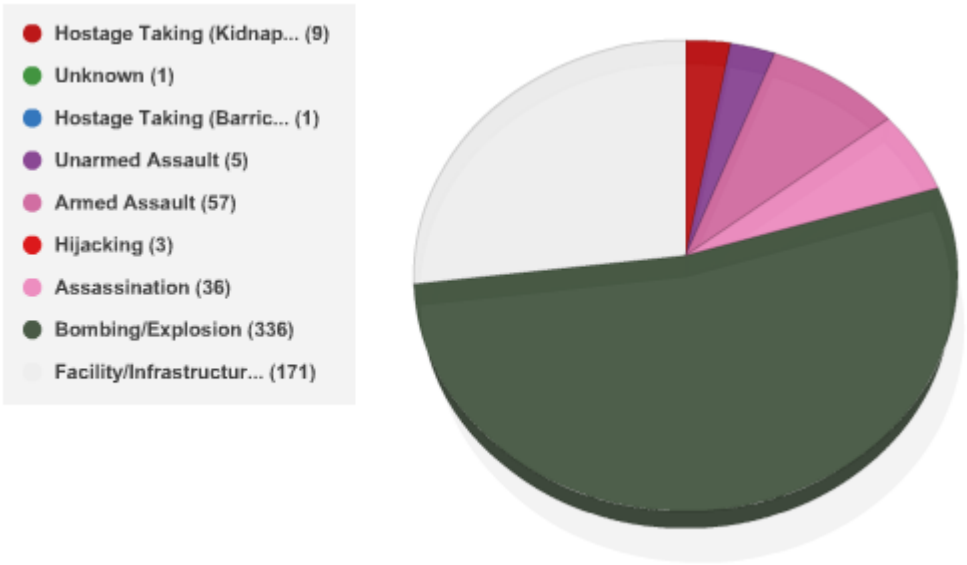
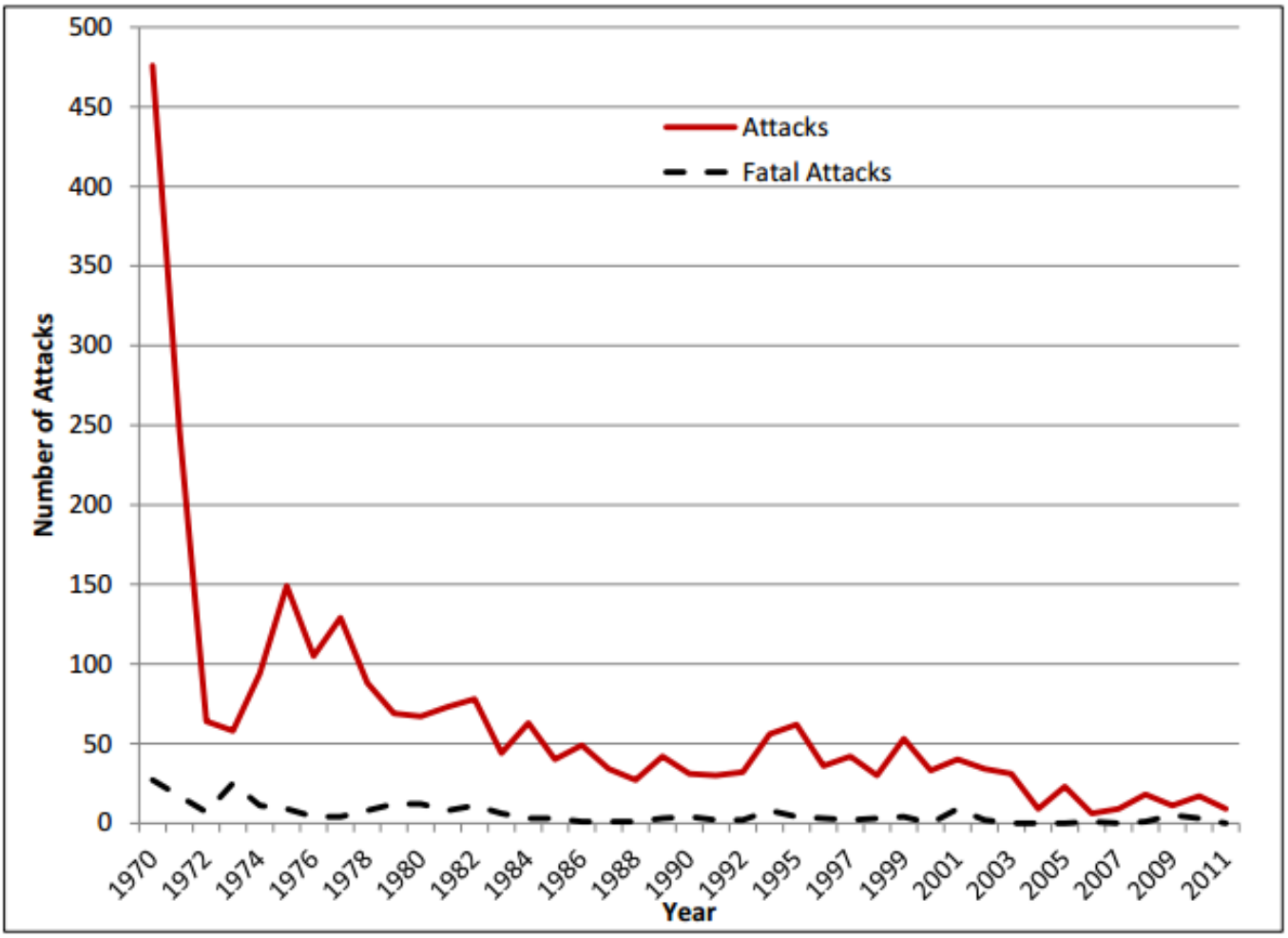


Figure 4-29: Types of Terrorist Attacks in California from 1970- Present

Source: ***Global Terrorism Database***

As seen in Figure 4-30, since 1970, the number of terrorist attacks in the United States has steadily decreased. According to the heritage.org website, most terrorist attacks on America happen outside our nation's borders. The number of international terrorist attacks against the United States from 1970-2011 is shown in Figure 4-31.



Note: There were 2,608 total attacks and 226 fatal attacks between 1970 and 2011.

Figure 4-30: Total and Fatal Terrorist Attacks in the United States by Year

Source: Nine facts about terrorism in the United States since 9/11, The Washington Post 9/11/2013

4.10.2 Location/ Geographic Extent

Unlike natural hazards, which often follow patterns and can be forecasted, manmade hazards such as acts of terrorism are much more unpredictable. Terrorists have the ability to choose targets and tactics and can often adjust conditions to achieve their objective. Terrorist attacks are often in a more specific location rather than a widespread, more predictable area such as a flood plain. As demonstrated in the Waterman Terrorism Incident, "homegrown terrorists" (self- radicalizing and pulls off their attacks without any help or communication with people in other countries) are even harder to detect and predict.

Translating most manmade hazard profiles into meaningful geospatial information is difficult at best. Instead, the planning team will use an asset-specific approach, identifying potentially at-risk critical facilities and systems in the community. Once a comprehensive list of assets has been developed, it will be prioritized so that the community's efforts can be

directed to protect the most important assets first. Then, beginning with the highest priority assets, the vulnerabilities of each facility or system to each type of hazard will be assessed (FEMA, 2003).

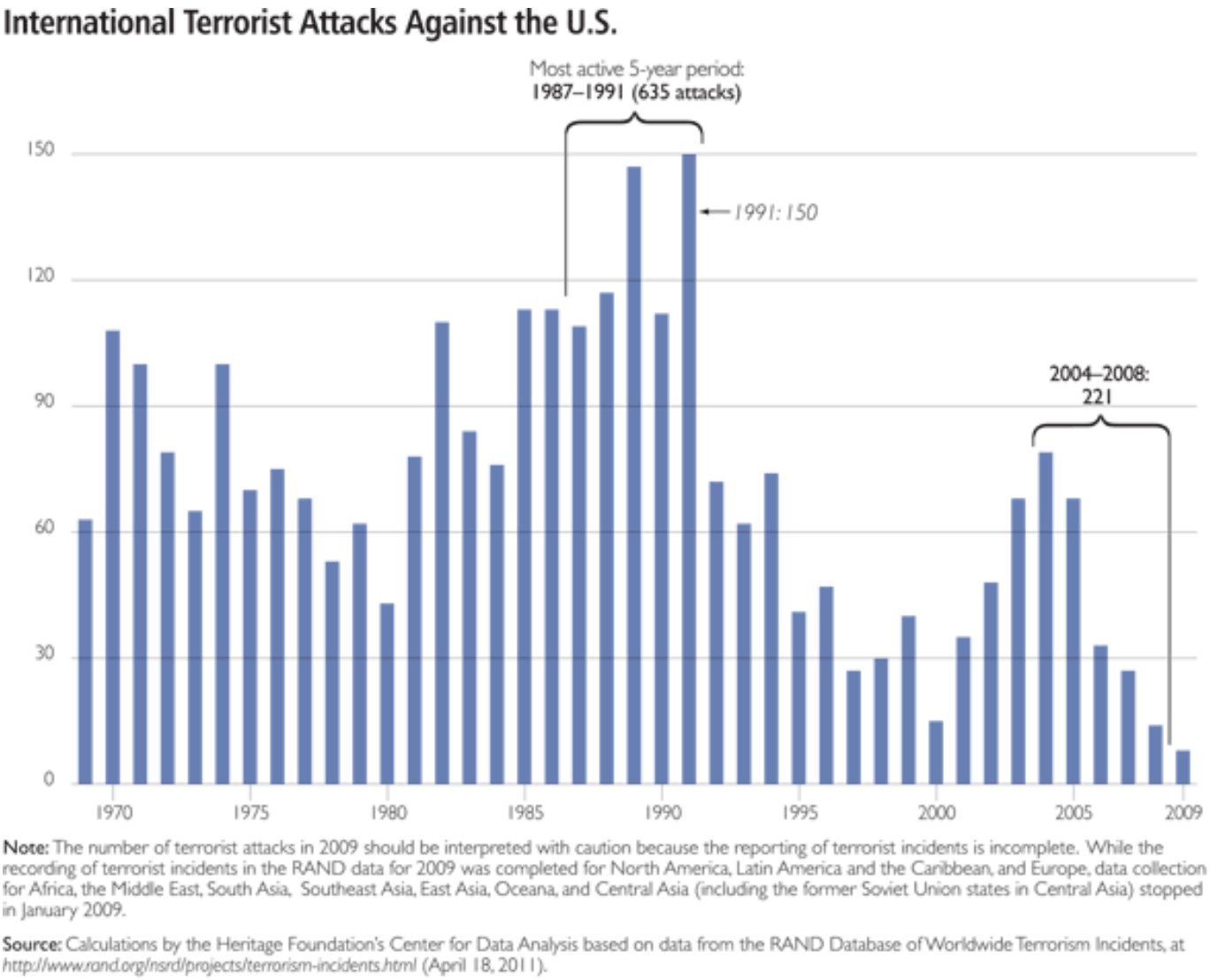


Figure 4-31: International Terrorist Attacks Against the United States

Source: Terror Trends: 40 Years' Data on international and Domestic Terrorism, Heritage.org 5/20/2011

4.10.3 Magnitude/ Severity

As previously discussed, predicting terrorist attacks cannot be done with the same level of accuracy as predicting a natural hazard and its potential impacts on the community. However, we can learn from past terrorist incidents. Table 4-12 profiles 10 different types of terrorist attacks and technological hazards.

4.10.4 Frequency/ Probability of Future Occurrences

We can usually forecast the type, frequency and location of a natural hazard thanks to the laws of physics and nature. However, when dealing with manmade hazards such as terrorism, we are often dealing with functions of the human mind-malevolence, incompetence, carelessness and other behaviors. These actions cannot be predicted with any accuracy, therefore, there is the potential for an act of terrorism to occur anywhere, at any time.

Table 4-12: Event Profiles for Terrorism and Technological Hazards

Hazard	Application Mode	Hazard Duration	Extent of Effects; Static/Dynamic	Mitigating and Exacerbating Conditions
Conventional Bomb/ Improvised Explosive Device	Detonation of explosive device on or near target; delivery via person, vehicle, or projectile.	Instantaneous; additional "secondary devices" may be used, lengthening the time duration of the hazard until the attack site is determined to be clear	Extent of damage is determined by type and quantity of explosive. Effects generally static other than cascading consequences, incremental structural failure, etc.	Overpressure at a given standoff is inversely proportional to the cube of the distance from the blast; thus, each additional increment of standoff provides progressively more protection. Terrain, forestation, structures, etc. can provide shielding by absorbing and/or deflecting energy and debris. Exacerbating conditions include ease of access to target; lack of barriers/shielding; poor construction; and ease of concealment of device
Chemical Agent *	Liquid/aerosol contaminants can be dispersed using sprayers or other aerosol generators; liquids vaporizing from puddles/ containers; or munitions.	Chemical agents may pose viable threats for hours to weeks depending on the agent and the conditions in which it exists.	Contamination can be carried out of the initial target area by persons, vehicles, water and wind. Chemicals may be corrosive or otherwise damaging over time if not remediated.	Air temperature can affect evaporation of aerosols. Ground temperature affects evaporation of liquids. Humidity can enlarge aerosol particles, reducing inhalation hazard. Precipitation can dilute and disperse agents but can spread contamination. Wind can disperse vapors but also cause target area to be dynamic. The micro-meteorological effects of buildings and terrain can alter travel and duration of agents. Shielding in the form of sheltering in place can protect people and property from harmful effects.

Hazard	Application Mode	Hazard Duration	Extent of Effects; Static/Dynamic	Mitigating and Exacerbating Conditions
Arson/ Incendiary Attack	Initiation of fire or explosion on or near target via direct contact or remotely via projectile.	Generally minutes to hours.	Extent of damage is determined by type and quantity of device/ accelerant and materials present at or near target. Effects generally static other than cascading consequences, incremental structural failure, etc.	Mitigation factors include built-in fire detection and protection systems and fire-resistive construction techniques. Inadequate security can allow easy access to target, easy concealment of an incendiary device and undetected initiation of a fire. Non-compliance with fire and building codes as well as failure to maintain existing fire protection systems can substantially increase the effectiveness of a fire weapon.
Armed Attack	Tactical assault or sniping from remote location.	Generally minutes to days.	Varies based upon the perpetrators' intent and capabilities	Inadequate security can allow easy access to target, easy concealment of weapons and undetected initiation of an attack.
Biological Agent *	Liquid or solid contaminants can be dispersed using sprayers/aerosol generators or by point or line sources such as munitions, covert deposits and moving sprayers.	Biological agents may pose viable threats for hours to years depending on the agent and the conditions in which it exists	Depending on the agent used and the effectiveness with which it is deployed, contamination can be spread via wind and water. Infection can be spread via human or animal vectors.	Altitude of release above ground can affect dispersion; sunlight is destructive to many bacteria and viruses; light to moderate wind will disperse agents but higher winds can break up aerosol clouds; the micro- meteorological effects of building and terrain can influence aerosolization and travel of agents.
Cyberterrorism	Electronic attack using one computer system against another.	Minutes to days	Generally no direct effects on built environment.	Inadequate security can facilitate access to critical computer systems, allowing them to be used to conduct attacks.

Hazard	Application Mode	Hazard Duration	Extent of Effects; Static/Dynamic	Mitigating and Exacerbating Conditions
Agriterrorism	Direct, generally covert contamination of food supplies or introduction of pests and/or disease agents to crops and livestock.	Days to months	Varies by type of incident. Food contamination events may be limited to discrete distribution sites, whereas pests and diseases may spread widely. Generally no effects on built environment.	Inadequate security can facilitate adulteration of food and introduction of pests and disease agents to crops and livestock.
Radiological Agent **	Radioactive contaminants can be dispersed using sprayers/aerosol generators, or by point or line sources such as munitions, covert deposits and moving sprayers.	Contaminants may remain hazardous for seconds to years depending on material used.	Initial effects will be localized to site of attack; depending on meteorological conditions, subsequent behavior of radioactive contaminants may be dynamic.	Duration of exposure, distance from source of radiation, and the amount of shielding between source and target determine exposure to radiation.

Hazard	Application Mode	Hazard Duration	Extent of Effects; Static/Dynamic	Mitigating and Exacerbating Conditions
Nuclear Bomb **	Detonation of nuclear device underground, at the surface, in the air or at high altitude.	Light/heat flash and blast/shock wave last for seconds; nuclear radiation and fallout hazards can persist for years. Electromagnetic pulse from a high altitude detonation lasts for seconds and affects only unprotected electronic systems.	Initial light, heat and blast effects of a subsurface, ground or air burst are static and are determined by the device's characteristics and employment; fallout of radioactive contaminants may be dynamic, depending on meteorological conditions.	Harmful effects of radiation can be reduced by minimizing the time of exposure. Light, heat and blast energy decrease logarithmically as a function of distance from seat of blast. Terrain, forestation, structures, etc. can provide shielding by absorbing and/or deflecting radiation and radioactive contaminants.
Hazardous Material Release (fixed facility or transportation)	Solid, liquid and/or gaseous contaminants may be released from fixed or mobile containers.	Hours to days	Chemicals may be corrosive or otherwise damaging over time. Explosion and/or fire may be subsequent. Contamination may be carried out of the incident area by persons, vehicles, water and wind.	As with chemical weapons, weather conditions will directly affect how the hazard develops. The micro-meteorological effects of building and terrain can alter travel and duration of agents. Shielding in the form of sheltering in place can protect people and property from harmful effects. Non-compliance with fire and building codes as well as failure to maintain existing fire protection and containment features can substantially increase the damage from a hazardous materials release.

**** Source: Jane's Chem-Bio Handbook***
***** Source: FEMA, Radiological Emergency Management Independent Study Course***
Source: FEMA State and Local Mitigation Planning- how-to guide: Integrating Manmade Hazards

4.11 Vulnerability Assessment

Note: The hazard exposure analysis has been developed with best available data and follows methodology described in the FEMA publication Understanding Your Risks—Identifying Hazards and Estimating Losses.

Note: There are other intangible losses that could result from a natural hazard event, such as losses of historic or cultural integrity or damage to the environment that are difficult to quantify. Other costs, including response and recovery costs, are often unrecoverable and are not addressed in this document.

4.11.1 Methodology

A vulnerability assessment was conducted for each of the identified priority hazards. Geospatial data is essential in determining population and assets exposed to particular hazards. Geospatial analysis can be conducted if a natural hazard has a particular spatial footprint that can be overlaid against the locations of people and assets. In Ontario, wildfire, flood, dam failure, earthquake, and winds have known geographic extents and corresponding spatial information about each hazard.

Several sources of data are necessary to conduct a vulnerability analysis. Figure 4-32 provides an exhibit of the data inputs and outputs used to create the vulnerability analysis results presented in this section. U.S. Census data is the primary source in determining natural hazard exposure to residents. Census data has been used to determine the population at risk, which is generally referred to as population exposure. Population exposure is provided for wildfire, flooding, dam failure, severe weather, earthquakes and landslides as potential hazards later in this section.

Together with the U.S. Census data, asset data was used to provide a snapshot of how City assets are affected by natural hazards. For purposes of this vulnerability analysis, asset data includes parcels and critical infrastructure within the Ontario boundaries. Critical infrastructure is described as assets that are essential for people and a community to function. Critical infrastructure includes such as utilities, city owned facilities, bridges, schools, and other community facilities that provide essential services to residents.

Critical facilities data was developed from a variety of sources including city owned and maintained data, state and federal government datasets, and private industry datasets. A critical infrastructure spatial database was developed to translate critical facilities information into georeferenced[5] points. Critical facility points are intersected with the spatial hazard layers to develop a list of “at risk” critical facilities. The city critical facilities that intersect with natural hazards are referred to as facilities with hazard “exposure”. Exposure results are presented later in this section.

[5] To georeference something means to define its existence in physical space. That is, establishing its location in terms of map projections or coordinate systems. The term is used both when establishing the relation between raster or vector images and coordinates, and when determining the spatial location of other geographical features.

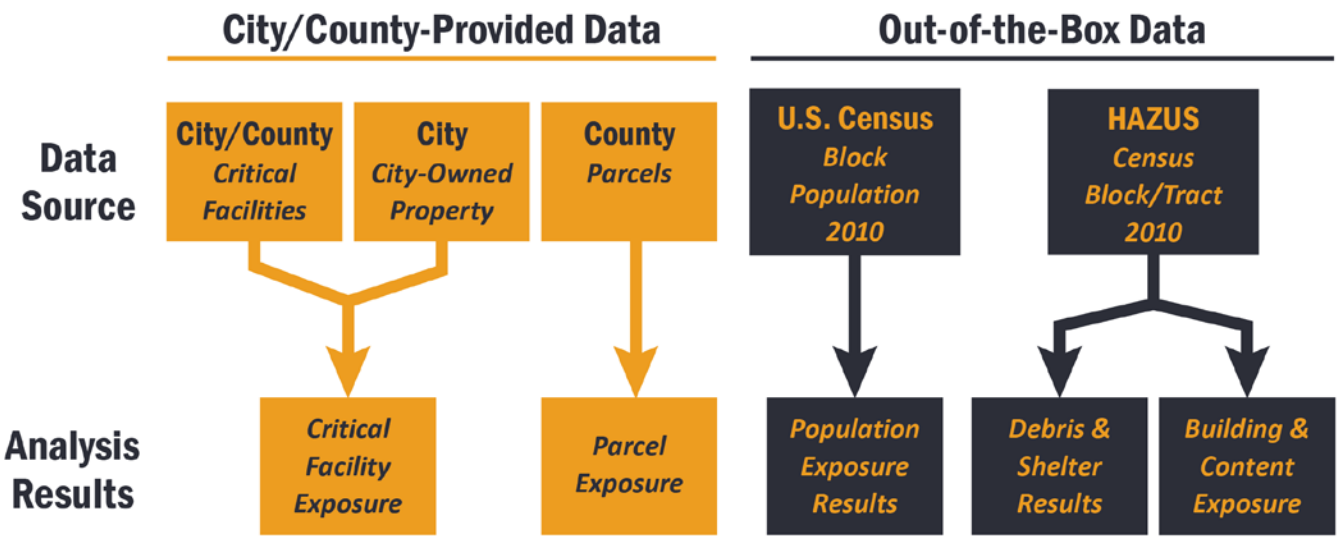


Figure 4-32: Data Source and Methodology

Lastly, FEMA's Hazus 3.2 (HAZUS) software was implemented to conduct detailed loss estimation for flood and earthquake. Hazus is a nationally applicable standardized methodology that contains models for estimating potential losses from earthquakes, floods, and hurricanes. HAZUS uses Geographic Information Systems (GIS) technology to estimate physical, economic, and social impacts of disasters. For purposes of this planning effort, Hazus was used to graphically illustrate the limits of identified high-risk locations due to possible earthquakes and floods.

The vulnerability and potential impacts from priority hazards that do not have specific mapped areas nor the data to support additional vulnerability analyses are discussed in more general terms in alphabetical order following the discussion on wildfire, flooding, dam failure and earthquake hazards.

4.11.2 Population and Assets

To describe vulnerability for each hazard, it is important to understand the "total" population and "total" assets at risk. The exposure for each hazard described in this section will refer to the percent of total population or percent of total assets. This provides the possible significance or vulnerability to people and assets for the natural hazard event and the estimated damage and losses expected during a "worst case scenario" event for each hazard. Sections below provide a description of the total population, critical facilities, and parcel exposure inputs.

4.11.2.1 Population

To develop hazard-specific vulnerability assessments, population near natural hazard risks should be determined to understand the total "at risk" population. We can understand how geographically defined hazards may affect the City of Ontario by analyzing the extent of the hazard in relation to the location of population. For purposes of the vulnerability assessment approximately 167,000 (100%) of the Ontario's population is exposed to one or more hazards within or near the Ontario boundaries. Each natural hazard scenario affects the residents differently depending on the location of the hazard and the population density of where the hazard could occur. Vulnerability assessment sections presented later in this section summarize the population exposure for each natural hazard.

4.11.2.1.1 Vulnerable Populations

The severity of a disaster depends on both the physical nature of the extreme event and the socioeconomic nature of the populations affected by the event. Important socioeconomic factors tend to influence disaster severity. A core concept in a vulnerability analysis is that different people, even within the same region, have a different vulnerability to natural hazards.

4.11.2.1.2 Income and Housing Condition

Income or wealth is one of the most important factors in natural hazard vulnerability. This economic factor affects vulnerability of low income populations in several ways. Lower income populations are less able to afford housing and other infrastructure that can withstand extreme events. Low income populations are less able to purchase resources needed for disaster response and are less likely to have insurance policies that can contribute to recovery efforts. Lower income elderly populations are less likely to have access to medical care due to financial hardship. Because of these and other factors, when disaster strikes, low income residences are far more likely to be injured or left without food and shelter during and after natural disasters.

Figure 4-36 shows the median household income distribution for the Ontario in 2012. The "median" is the value that divides the distribution of household income into two equal parts (e.g., the middle). The average median household income in the Ontario between 2010 and 2014 was $ 57,00, in the United States during the same period the median house household income was $50,157. The map in Figure 4-36 shows 2012 household income estimates using Census 2010 geographies.

4.11.2.1.3 Age

Children and the elderly tend to be more vulnerable during an extreme natural disaster. They have less physical strength to survive disasters and are often more susceptible to certain diseases. The elderly often also have declining vision and hearing and often miss reports of upcoming natural hazard events. Children, especially young children, have the inability to provide for themselves. In many cases, both children and the elderly depend on others to care for them during day to day life.

Finally, both children and the elderly have fewer financial resources and are frequently dependent on others for survival. In order for these populations to remain resilient before and after a natural hazard event, it may be necessary to augment city residents with resources provided by the City, state and federal emergency management agencies and organizations. See Figure 4-37 and Figure 4-38 for location of vulnerable population by age within the City of Ontario.

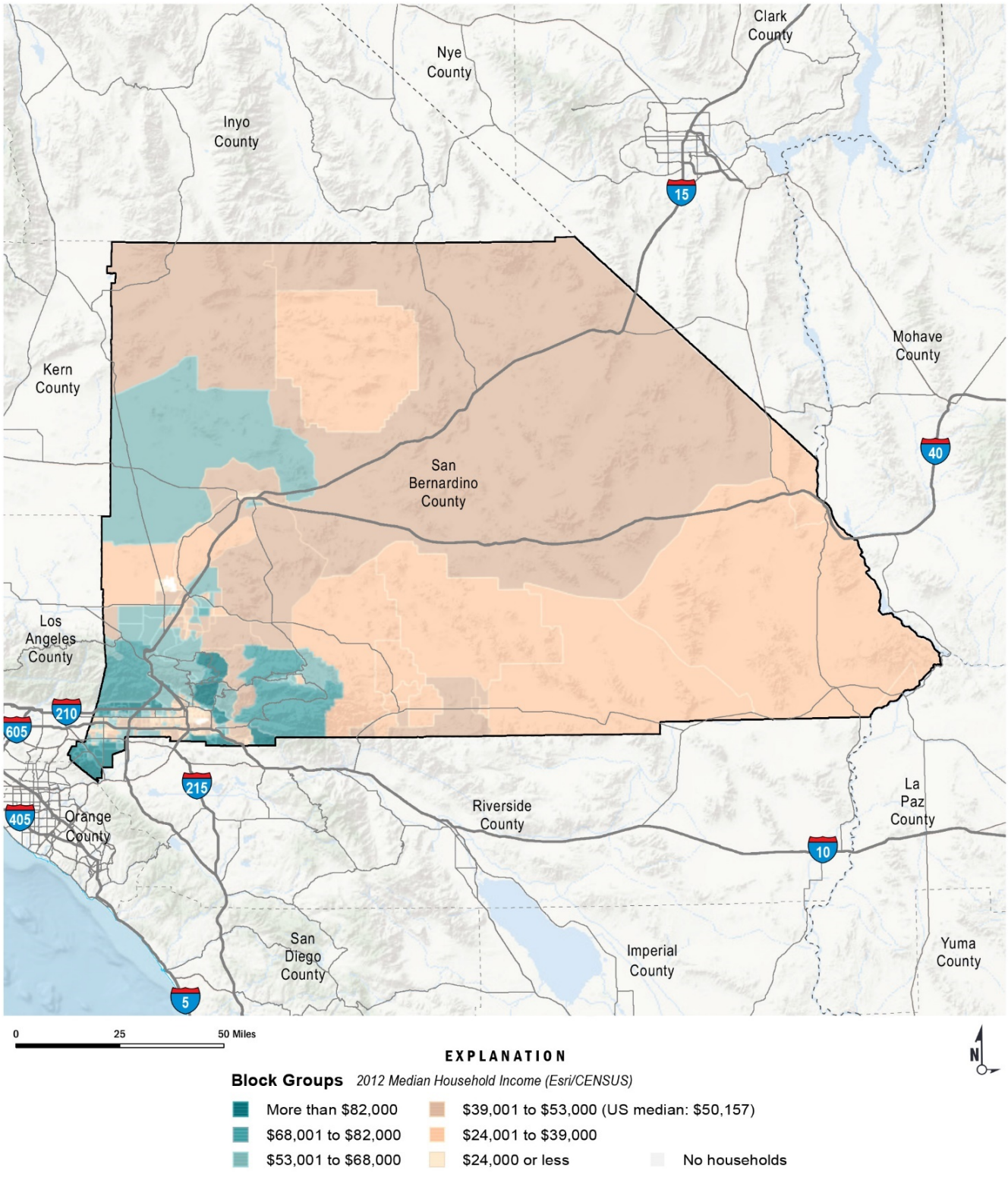


Figure 4-33: Median Household Income Distribution Map

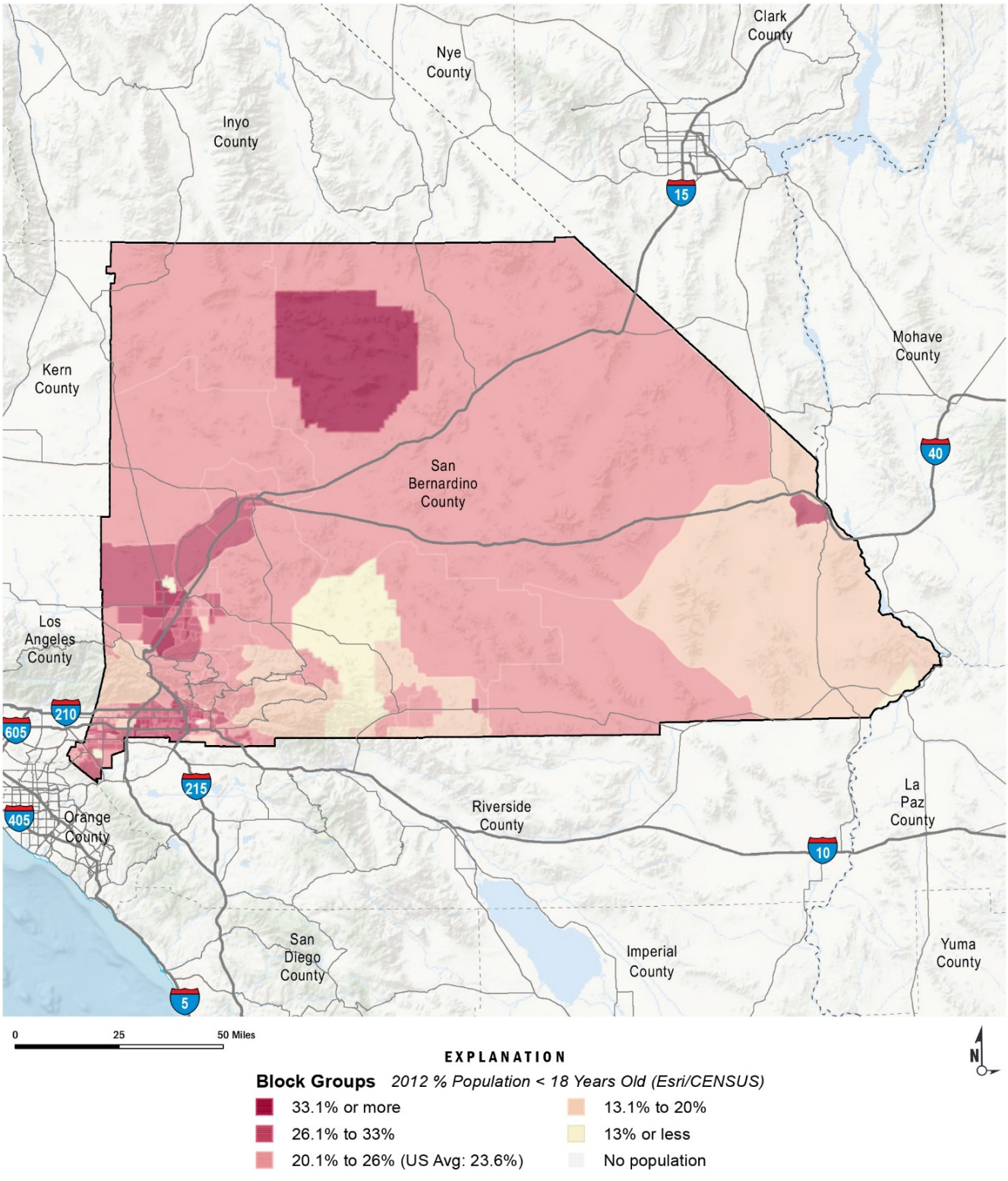


Figure 4-34: Population under 18

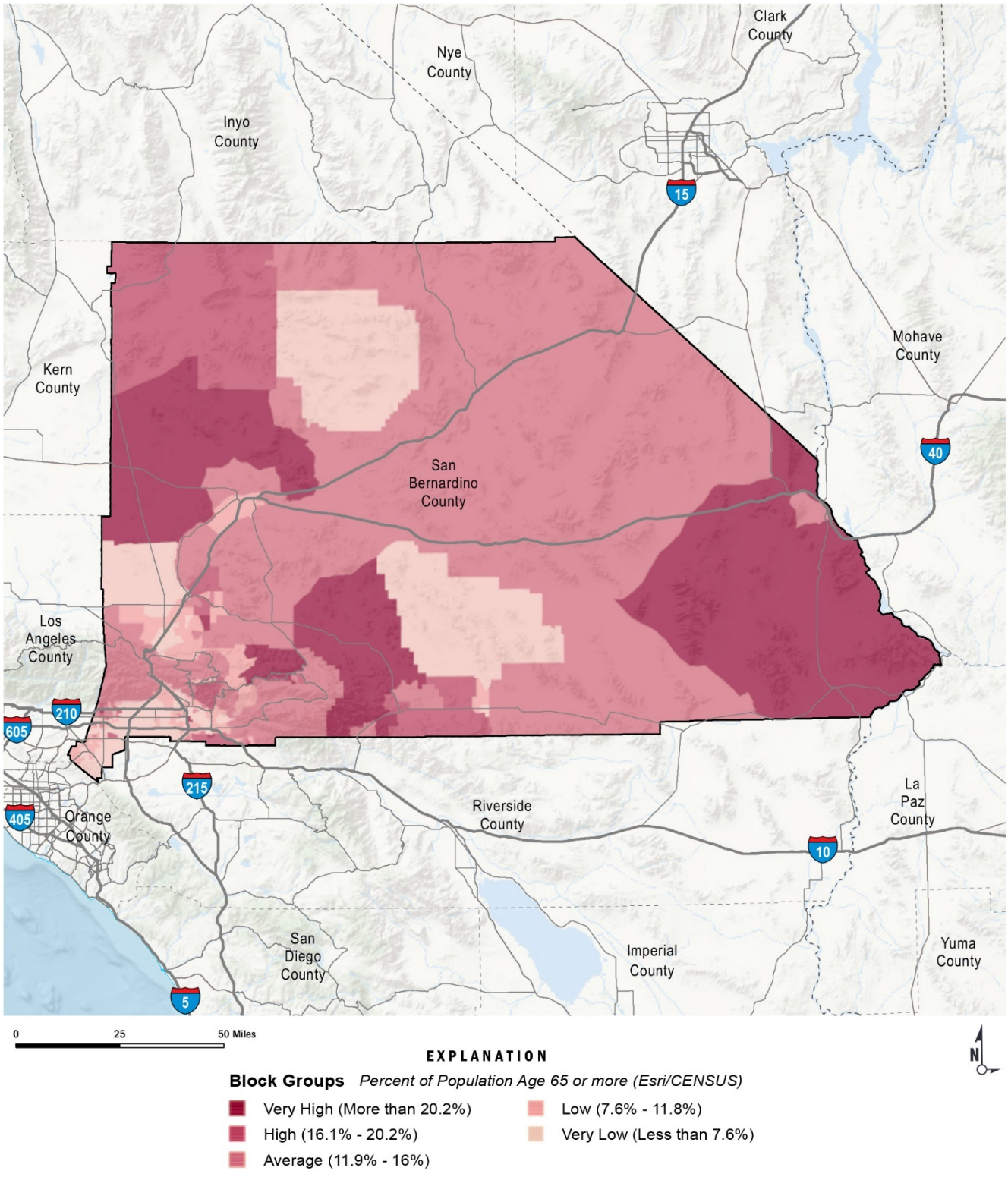


Figure 4-35: Population Over 65

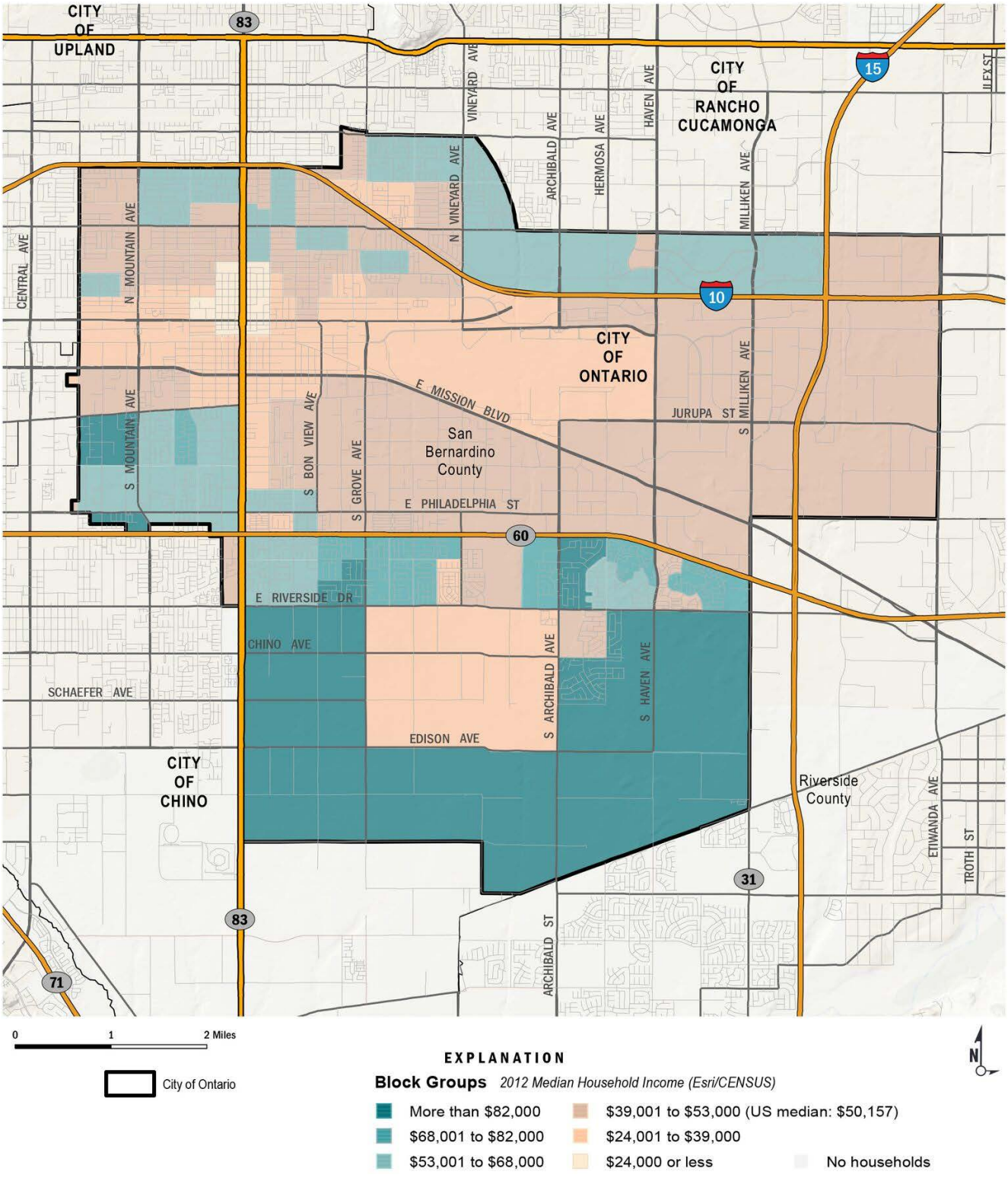


Figure 4-36: Median Household Income in Ontario

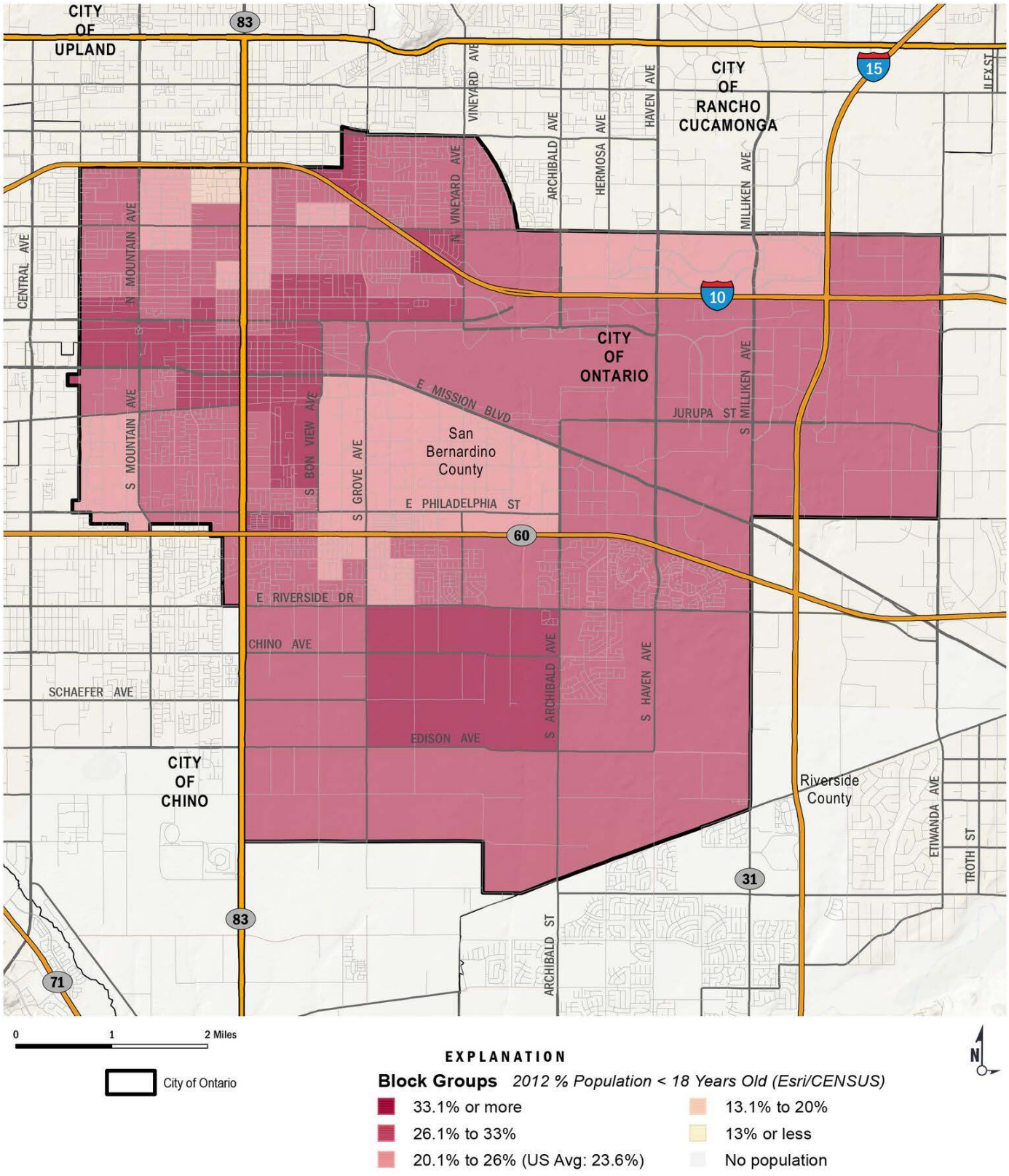


Figure 4-37: Ontario Population Under 18

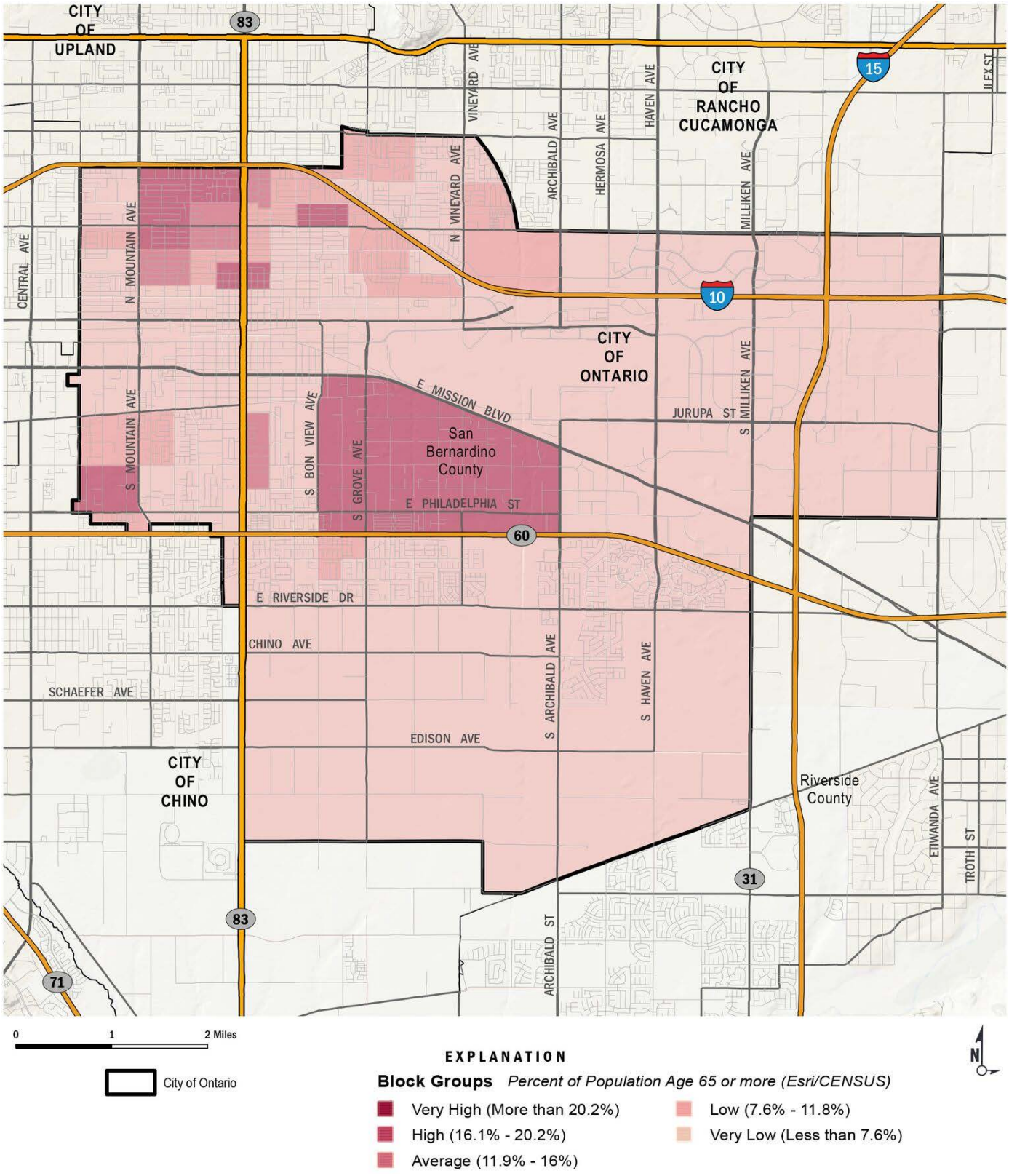


Figure 4-38: Ontario Population 65 or Older

4.11.2.2 Critical Facilities

Critical facilities are of particular concern when conducting hazard mitigation planning. Critical facilities are defined as essential services, and if damaged, would result in severe consequences to the health, safety, and welfare of the public.

An inventory of critical facilities based on data from the County and other publicly sourced information were used to develop a comprehensive inventory of facility points and lifelines. Critical facility points include fire stations, buildings containing hazardous materials (HAZMAT), schools, transportation, utilities, and government buildings. Lifelines include transportation routes only. A current representation of the critical facilities and lifelines are provided in Table 4-13. Some critical facility information has been omitted from documentation due to national security purposes. The Ontario Fire Department manages and maintains a complete list of critical facilities.

Table 4-13: Critical Facility Points

Infrastructure Type	Total Feature Count
Essential Facility	75
EOC	1
Fire Station	9
Government Facility	-
Hospital	6
Police Station	1
School	58
High Potential Loss	883
Dam	-
Economic Element-Major Employer	-
Hazmat	708
Historic/Cultural Resource-Historic	-
Utility-Communication Facility	50
Utility-Electric Power Facility	-
Utility-Natural Gas Facility	1
Utility-Potable Water Facility	41
Utility-Waste Water Facility	1
Vulnerable Population-Adult Residential Care	25
Vulnerable Population-Child Care	42
Vulnerable Population-Flood Zone	-
Vulnerable Population-Foster/Home Care	6
Vulnerable Population-Mobile Home Park	-
Vulnerable Population-RV Park	-
Vulnerable Population-Senior Care	9
Transportation and Lifeline	100
Highway Bridge	91
Railway Bridge	5
Bus Facility	-
Rail Facility	1
Airport Facility	3
Grand Total	**1,058**

4.11.3 HAZUS-MH Inputs

FEMA's loss estimation software, Hazus 3.2, was used to analyze the Ontario's building risk to flood and earthquake hazards. Hazus contains a database of economic, demographic, building stock, transportation facilities, local geology, and other information that can be used for several steps in the risk assessment process. Hazus software operates on structure square footage, structure replacement, and content replacement costs aggregated to the census block and tract levels depending on type of hazard analysis. Table 4-14 and Figure 4-44 provides value data for building categories at the census block and census tract levels. Census block and census tracts are used to provide input information for the Hazus analysis presented in this report.

The project team used the SBEFRA project incorporated these newly updated DFIRM data into HAZUS to assess potential losses in the mapped 100-year (with and without levee protection) and 500-year flood zones. The Ontario results are provided in Table 4-14.

Note: The HAZUS software utilizes different census level information inputs to develop loss estimates depending on the hazard module. The flood module uses census block information while the earthquake module uses census tract information. It is important to understand the total values of each as estimated damage to the community is presented on a percent of total value basis.

Table 4-14: Hazus Flood Census Block Input Values

Building Type	Building Replacement Costs ($000)	Building Replacement Cost (%)	Content Replacement Cost ($000)	Content Replacement Cost (%)	Total Value ($000)	Total Value (%)
Agricultural	$ 70,841.00	0.3%	$ 70,841.00	0.3%	$ 141,682.00	1%
Commercial	$ 1,208,163.00	4.4%	$ 1,231,690.00	4.5%	$ 2,439,853.00	9%
Education	$ 120,017.00	0.4%	$ 127,161.00	0.5%	$ 247,178.00	1%
Governmental	$ 34,216.00	0.1%	$ 43,192.00	0.2%	$ 77,408.00	0%
Industrial	$ 452,710.00	1.6%	$ 610,063.00	2.2%	$ 1,062,773.00	4%
Religion	$ 176,012.00	0.6%	$ 176,012.00	0.6%	$ 352,024.00	1%
Residential	$ 15,483,634.00	56.2%	$ 7,744,650.00	28.1%	$ 23,228,284.00	84%
Total	**$ 17,545,593.00**	**64%**	**$ 10,003,609.00**	**36%**	**$ 27,549,202.00**	

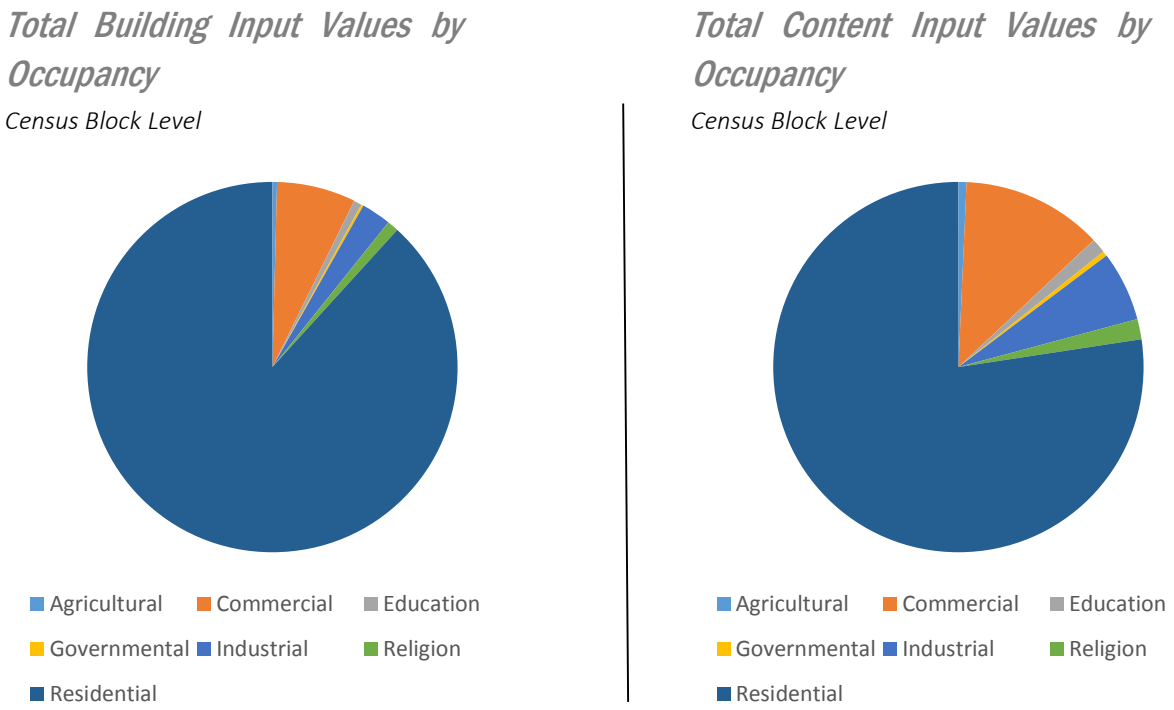


Figure 4-39: Census Block Building and Content Exposure Values

Table 4-15: Hazus Earthquake Census Tract Input Values

Building Type	Building Replacement Costs ($000)	Building Replacement Cost (%)	Content Replacement Cost ($000)	Content Replacement Cost (%)	Total Value ($000)	Total Value (%)
Agricultural	$ 264,949.00	0.2%	$ 264,949.00	0.2%	$ 529,898.00	0%
Commercial	$ 11,056,871.00	6.8%	$ 11,756,479.00	7.2%	$ 22,813,350.00	14%
Education	$ 819,946.00	0.5%	$ 874,703.00	0.5%	$ 1,694,649.00	1%
Governmental	$ 265,933.00	0.2%	$ 316,930.00	0.2%	$ 582,863.00	0%
Industrial	$ 3,733,265.00	2.3%	$ 5,276,431.00	3.2%	$ 9,009,696.00	6%
Religion	$ 958,122.00	0.6%	$ 958,122.00	0.6%	$ 1,916,244.00	1%
Residential	$ 84,302,884.00	51.7%	$ 42,159,954.00	25.9%	$ 126,462,838.00	78%
Total	**$ 101,401,970.00**	**62%**	**$ 61,607,568.00**	**38%**	**$ 163,009,538.00**	

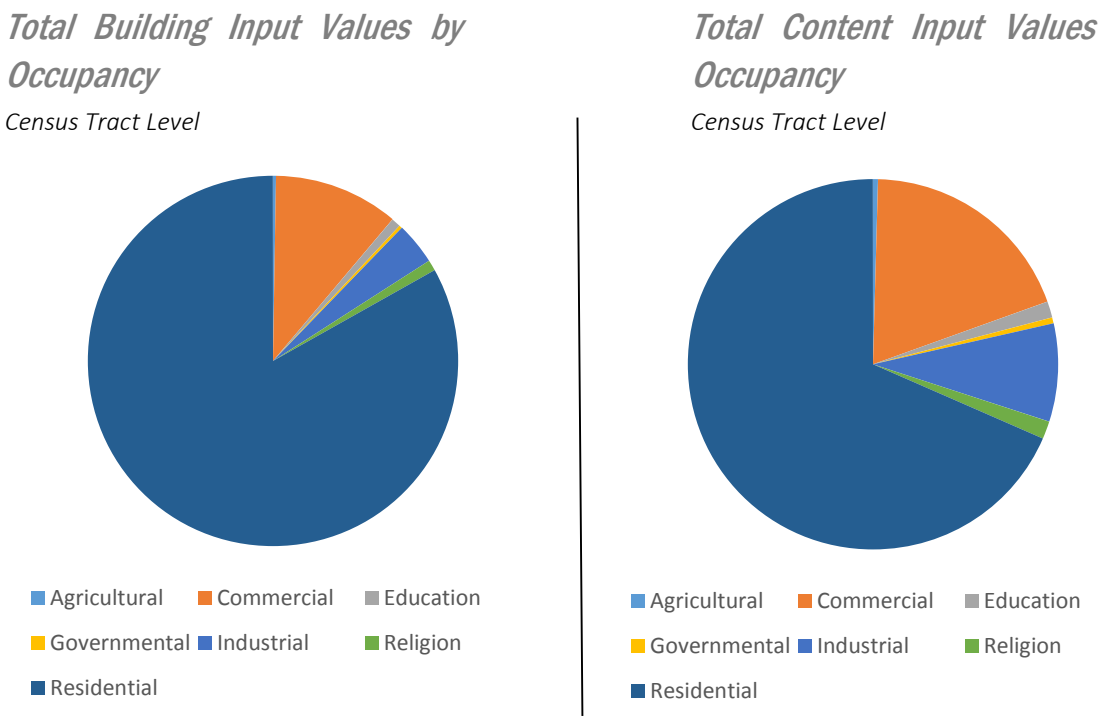


Figure 4-40: Census Tract Building and Content Exposure Values

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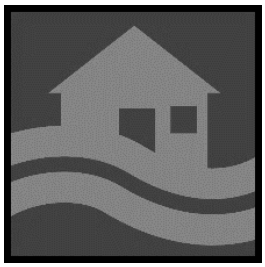
4.11.4 Flooding



Flooding is a significant problem in Ontario as described in the flood hazard profile. Historically, the operational area has been subject to flooding during periods of heavy rainfall, falling primarily between the months of October through April, which causes Storm drains to become overwhelmed and overflow their banks and/or inundate storm drainage systems. Occasionally, storm drain flows in Ontario have resulted in flooding of residential properties, road blockages, and traffic disruptions. In urbanizing areas, the increase in paved areas associated with new development decrease the amount of open land available to absorb rainfall and runoff, thus increasing the volume of water that must be carried away from by waterways. Flooding has damaged commercial and residential structures; flooded bridges and streets and flood control works to erode.

4.11.4.1 Population living with Flood Risk

Of greatest concern in the event of a flood is the potential for loss of life. Using 2012 population data aggregated by census blocks, an estimate was made of the population exposed to the 100- and 500-year floodplain. To account for census blocks that were partially within the floodplain, a weighted average was employed to calculate the proportion of the population within the floodplain. The results of the population overlay are shown in Figure 4-41. More than 500 residents live near or within the 100-year floodplain and approximately 57,406 city residents live within the 500-year floodplain. Approximately 10,000 city residents live within areas protected by levees.

Population Exposure

Population Count within the City of Ontario by Flood Hazard Zone

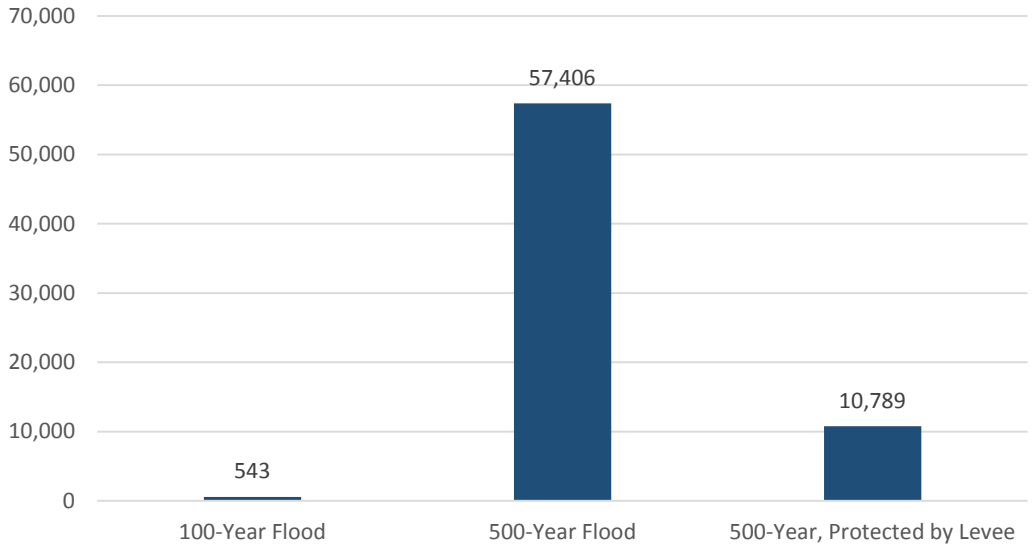


Figure 4-41: Population Exposure to Flood Hazards

Table 4-16: Area of Flood Zones

Flood Hazard Type	Sum of Acres	Sum of Square Miles
100-Year Flood	580.44	0.91
100YR		
500-Year Flood	26,562.00	41.50
500YR	2,260	4
500YR 0.2%	29,403	45.94

4.11.4.2 Residential Parcel Value with Flood Risk

The County's parcel layer was used as the basis for the inventory of improved residential parcels within the FEMA NFIP flood zones. In some cases, a parcel will be within in multiple flood zones. GIS was used to create centroids, or points, to represent the center of each parcel polygon – this is assumed to be the location of the structure for analysis purposes. The centroids were then overlaid with the floodplain layer to determine the flood risk for each structure. The flood zone in which the centroid was located was assigned to the entire parcel. This methodology assumed that every parcel with a square footage value greater than zero was developed in some way. Only improved parcels greater than $20,000 were analyzed. Table 4-17 shows the count of at-risk parcels and their improvement and land exposure values.

Table 4-17: Parcels Exposed to NFIP Flood Zones

Flood Hazard Zone	Improved Parcel Count	Improvement Value Exposure ($000)	Land Value Exposure ($000)	Total Exposure ($000)
100-Year Flood	3,426	$ 518,482.83	$ 368,057.83	$ 886,540.65
500-Year Flood	46,012	$ 8,105,381.05	$ 3,164,341.34	$ 11,269,722.39
500-Year, Protected by Levee	4,608	$ 1,327,941.71	$ 527,317.13	$ 1,855,258.83
Grand Total	**54,046**	**$ 9,951,805.59**	**$ 4,059,716.30**	**$ 14,011,521.88**

While there are several limitations to this methodology, it does allow for potential loss estimation. It should be noted that the analysis may include structures in the floodplain that are elevated at or above the level of the base flood elevation, which will likely decrease potential flood damage to these structures. Also, it is important to remember that the County Assessor's values are well below actual market values; thus, the actual value of assets at risk may be significantly higher than those included herein.

4.11.4.3 Critical Facilities Exposure

Critical facilities data were overlain with flood hazard data to determine the type and number of facilities within the 100- and 500-year floodplain. Flooding poses numerous risks to critical facilities and infrastructure:

- Roads or railroads that are blocked or damaged can prevent access throughout the area and can isolate residents and emergency service providers needing to reach vulnerable populations or to make repairs.
- Bridges washed out or blocked by floods or debris from floods also can cause isolation.
- Creek or river floodwaters can back up drainage systems causing localized flooding.
- Floodwaters can get into drinking water supplies causing contamination.
- Sewer systems can be backed up causing waste to spill into homes, neighborhoods, rivers, and streams.
- Underground utilities can also be damaged.

Table 4-18 provides an inventory of critical facilities in the floodplain for Ontario and provides the locations of lifelines relative to the floodplain in the areas of the City. With a total of 513 essential facilities, high potential losses, and transportation and lifeline structures located in either the 100- or 500-year flood zone, the impact to the community could be devastating if these critical facilities were damaged or destroyed during a flood event.

Table 4-18: Critical Facility Exposed to NFIP Flood Zones

Infrastructure Type	100 Year Flood Zone	500 Year Flood Zone	500 Year Flood Zone, Protected by Levee	Total Feature Count
Essential Facility	0	23	7	30
EOC	0	0	0	0
Fire Station	0	7	0	7
Government Facility	0	0	0	0
Hospital	0	0	1	1
Police Station	0	0	1	1
School	0	16	5	21
High Potential Loss	6	363	50	419
Dam	0	0	0	0
Economic Element-Major Employer	0	0	0	0
Hazmat	6	298	36	340
Historic/Cultural Resource-Historic	0	0	0	0
Utility-Communication Facility	0	17	6	23
Utility-Electric Power Facility	0	0	0	0
Utility-Natural Gas Facility	0	0	0	0
Utility-Potable Water Facility	0	20	1	21
Utility-Waste Water Facility	0	0	1	1
Vulnerable Population-Adult Residential Care	0	10	2	12
Vulnerable Population-Child Care	0	15	3	18
Vulnerable Population-Flood Zone	0	0	0	0
Vulnerable Population-Foster/Home Care	0	3	0	3
Vulnerable Population-Mobile Home Park	0	0	0	0
Vulnerable Population-RV Park	0	0	0	0
Vulnerable Population-Senior Care	0	0	1	1
Transportation and Lifeline	8	47	9	64
Highway Bridge	8	40	9	57
Railway Bridge	0	4	0	4
Bus Facility	0	0	0	0
Rail Facility	0	0	0	0
Airport Facility	0	3	0	3
Grand Total	**14**	**433**	**66**	**513**

4.11.4.4 Loss Estimation Results

The HAZUS analysis was used to assess the risk from and vulnerability to flooding within Ontario. HAZUS buildings data is aggregated to the census block level, known as the general building stock (GBS), which has a level of accuracy acceptable for hazard mitigation planning purposes. The following sections describe risk to and vulnerability of the GBS within the Ontario's mapped regulatory floodplain. The total value of exposed buildings and content within the Ontario's planning area was generated using HAZUS and is previously summarized in Table 4-19.

HAZUS calculates losses to structures from flooding by considering the depth of flooding and type of structure. Using historical flood insurance claim data, the software estimates the percentage of damage to structures and their contents by applying established depth-damage curves. Damage estimates are then translated to estimated dollar losses. The results are summarized in Table 4-20 and Figure 4-47. An estimate $59,000,000.00 of damage could occur in the Ontario's regulatory floodplain if all flooding sources experienced a 100-year flood event. An all-encompassing event (all tributaries flooding to the NFIP 100-year flood zone) is estimated to cause losses of 0.2 percent of the total GBS within the City boundaries. An estimated $ 396,000.000.00 of damage could occur if all flooding sources experienced a 500-year flood event, representing 1.4 percent of the total GBS within the City boundaries.

While there are several limitations to the FEMA HAZUS model, it does allow for potential loss estimation. It should be noted that the analysis may include structures in the floodplain that are elevated at or above the level of the base flood elevation, which will likely mitigate flood damage. Also, it is important to remember that the replacement costs are well below actual market values, thus, the actual value of assets at risk may be significantly higher than those included herein.

Table 4-19: Flood Loss Estimation (Based on Depth) in NFIP Flood Zones

Flood Hazard Zone	Building Loss ($000)	Building Loss (% of Total Value)	Content Loss ($000)	Content Loss (% of Total Value)	Total Estimated Loss ($000)	Total Estimated (% of Total Value)
100-Year	$ 34,749.00	0.1%	$ 24,858.00	0.1%	$ 59,849.00	0.2%
500-Year	$ 218,454.00	0.8%	$ 173,304.00	0.6%	$ 396,336.00	1.4%

Table 4-20: 100-Year Flood Loss Estimation (Based on Depth) in NFIP Flood Zones by Occupancy Type

Building Type	Building Replacement Costs ($000)	Building Replacement Cost (% of Total Value)	Content Replacement Cost ($000)	Content Replacement Cost (% of Total Value)	Total Estimated Loss ($000)	Total Loss Estimation (% of Total Value)
Agriculture	$ 147.00	0.10%	$ 246.00	0.17%	$ 427.00	0.30%
Commercial	$ 1,874.00	0.08%	$ 4,458.00	0.18%	$ 6,463.00	0.26%
Education	$ 46.00	0.02%	$ 271.00	0.11%	$ 319.00	0.13%
Government	$ 56.00	0.07%	$ 304.00	0.39%	$ 370.00	0.48%
Industrial	$ 201.00	0.02%	$ 389.00	0.04%	$ 624.00	0.06%
Religious/Non-Profit	$ 326.00	0.09%	$ 1,946.00	0.55%	$ 2,279.00	0.65%
Residential	$ 32,099.00	0.14%	$ 17,244.00	0.07%	$ 49,367.00	0.21%
Grand Total	**$ 34,749**	**0.13%**	**$ 24,858**	**0.09%**	**$ 59,849**	**0.22%**

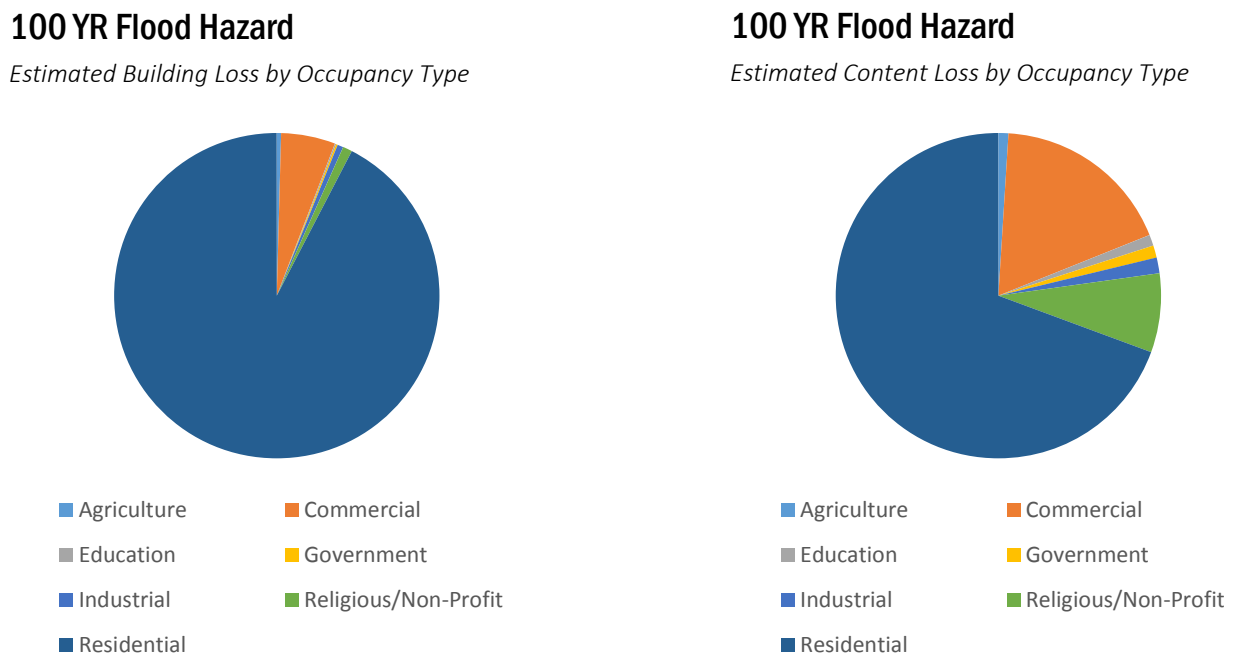


Figure 4-42: Total Building and Content Loss by Occupancy Type

Table 4-21: 500-Year Flood Loss Estimation (Based on Depth) in NFIP Flood Zones by Occupancy Type

Building Type	Building Replacement Costs ($000)	Building Replacement Cost (% of Total Value)	Content Replacement Cost ($000)	Content Replacement Cost (% of Total Value)	Total Estimated Loss ($000)	Total Loss Estimation (% of Total Value)
Agriculture	$ 674.00	0.48%	$ 981.00	0.69%	$ 1,781.00	1.26%
Commercial	$ 10,080.00	0.41%	$ 27,640.00	1.13%	$ 39,179.00	1.61%
Education	$ 720.00	0.29%	$ 3,563.00	1.44%	$ 4,355.00	1.76%
Government	$ -	0.00%	$ 2.00	0.00%	$ 9.00	0.01%
Industrial	$ 6,036.00	0.57%	$ 13,975.00	1.31%	$ 22,438.00	2.11%
Religious/Non-Profit	$ 1,210.00	0.34%	$ 6,070.00	1.72%	$ 7,332.00	2.08%
Residential	$ 199,734.00	0.86%	$ 121,073.00	0.52%	$321,242.00	1.38%
Grand Total	**$ 218,454**	**0.79%**	**$ 173,304**	**0.63%**	**$ 396,336**	**1.44%**

Note: *from section 4.10.3 'Hazus Floods Census Block Input Values' totals
1- Hazus Census Block Building Stock Value ($000):
2- Building Replacement Costs = $17,545,593
3- Content Replacement Cost = $10,003,609
4- Total Value = $27,549,202

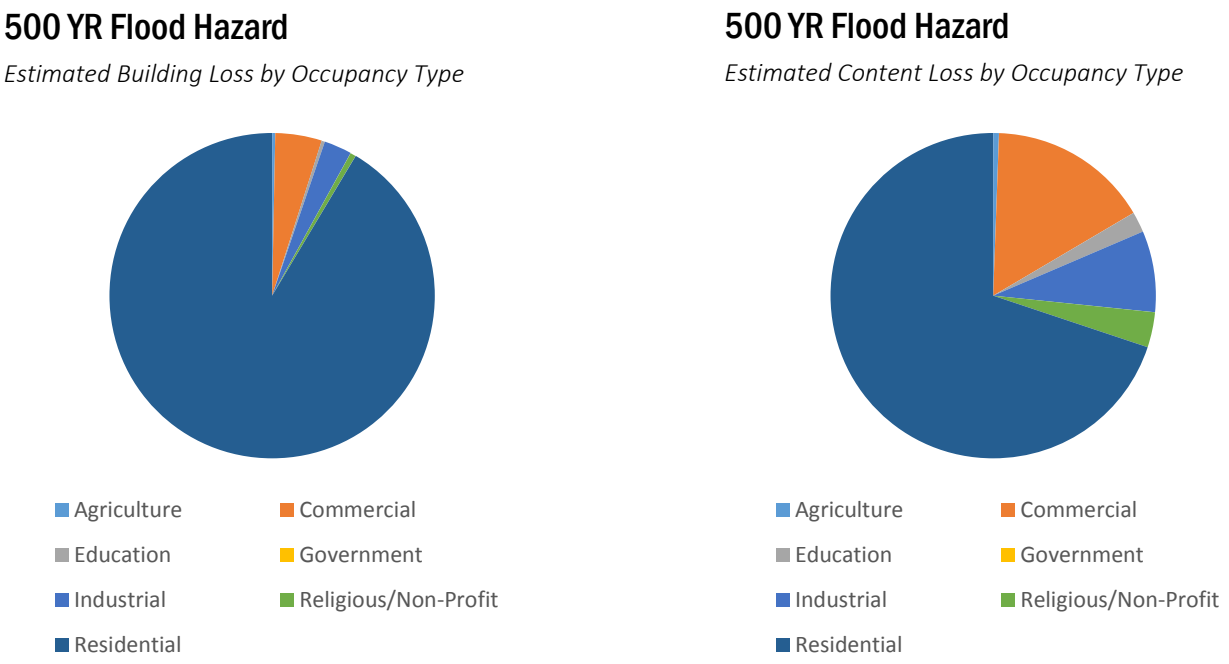
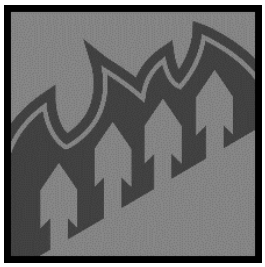


Figure 4-43: Total Building and Content Loss by Occupancy Type

Table 4-22: Parcel Value in Flood Zones

Flood Hazard Zone	Improved Parcel Count	Improvement Value Exposure ($000)	Land Value Exposure ($000)	Total Exposure ($000)
100-Year Flood	88	$ 14,267	$ 12,747	$ 27,014
500-Year Flood	32,160	$ 15,810,305	$ 7,684,001	$ 23,494,306
500-Year, Protected by Levee	2,196	$ 1,149,495	$ 297,386	$ 1,446,882
Grand Total	**34,444**	**$ 16,974,067**	**$ 7,994,135**	**$ 24,968,202**

4.11.5 Wildfire



Risk to the Ontario from wildfire is of significant concern. High fuel loads in the hills, along with geographical and topographical features, create the potential for both natural and human-caused fires that can result in loss of life and property. These factors, combined with natural weather conditions common to the area, including periods of drought, high temperatures, low relative humidity, and periodic winds, can result in frequent and sometimes catastrophic fires. During the year round fire season the dry vegetation and hot and sometimes windy weather, combined with continued growth in the WUI areas, results in an increase in the number of ignitions. Any fire, once ignited, has the potential to quickly become large and out-of-control.

Potential losses from wildfire include human life, structures and other improvements, natural and cultural resources, quality and quantity of water supplies, cropland, timber, and recreational opportunities. Short and long-term economic losses could also result due to loss of business and other economic drivers associated with Ontario summer season activities. Smoke and air pollution from wildfires can be a severe health hazard. In addition, catastrophic wildfire can create favorable conditions for other hazards such as flooding, landslides, and erosion during the rainy season.

Generally, there are three major factors that sustain wildfires and predict a given area's potential vulnerability to burn. These factors are fuel, topography, and weather.

- Fuel – Fuel is the material that feeds a fire and is a key factor in wildfire behavior. Fuel is generally classified by type and volume. Fuel sources are diverse and include everything from dead tree leaves, twigs, and branches, to dead standing trees, live trees, brush, and cured grasses. Manmade structures are also considered a fuel source, such as homes and other associated combustibles. The type of prevalent fuel directly influences the behavior of wildfire. Fuel is the only factor that is under human control.
- Topography – An area's terrain and slope affect its susceptibility to wildfire spread. Both fire intensity and rate of spread increase as slope increases due to the tendency of heat from a fire to rise via convection. The arrangement of vegetation throughout a hillside can also contribute to increased fire activity on slopes.
- Weather – Weather components such as temperature, relative humidity, wind, and lightning also affect the potential for wildfire. High temperatures and low relative humidity dry out fuels that feed wildfires, creating a situation where fuel will ignite more readily and burn more intensely. Thus, during periods of drought the threat of wildfire increases. Wind is the most treacherous weather factor. The greater the wind, the faster a fire can spread and the more intense it can be. Wind shifts, in addition to wind speed, can occur suddenly due to temperature changes or the interaction of wind with topographical features such as slopes or steep hillsides. As part of a weather system, lightning also ignites wildfires, often in difficult to reach terrain for firefighters.

Factors contributing to the high, widespread wildfire risk in Ontario include:

- Large undeveloped lots
- Uncut weeds and grasses

4.11.5.1 Population at Risk

Wildfire risk is of greatest concern to populations residing in the wildfire hazard zones. Ontario census block data was used to estimate populations within the hazard zones.

4.11.5.2 Residential Parcel Value at Risk

Population Exposure

Population Count by Wildfire Hazard Zone

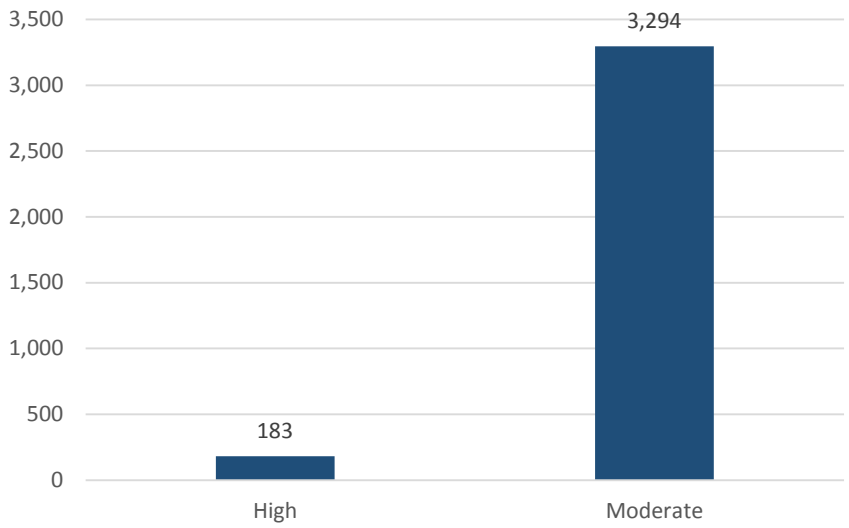


Figure 4-44: Population Exposure to Wildfire

The County's parcel layer was used as the basis for the inventory of improved residential parcels. In some cases, a parcel will be within in multiple fire threat zones. GIS was used to create centroids, or points, to represent the center of each parcel polygon – this is assumed to be the location of the structure for analysis purposes. The centroids were then overlaid with the fire threat layer to determine the risk for each structure. The fire threat zone in which the centroid was located was assigned to the entire parcel. This methodology assumed that every parcel with a square footage value greater than zero was developed in some way. Only improved parcels were analyzed. Table 4-23 exhibits portions of Ontario that have significant assets at risk to wildfire in the fire severity zones.

Table 4-23: Residential Buildings and Content at Risk from Wildfire

Fire Hazard Severity Hazard Zone	Improved Parcel Count	Improvement Value Exposure ($000)	Land Value Exposure ($000)	Total Exposure ($000)
Very High	43,794	$ 8,602,590	$ 3,075,148	$ 11,677,739
High	11,512	$ 1,822,731	$ 551,160	$ 2,373,892
Moderate	25,477	$ 3,221,982	$ 950,044	$ 4,172,026
Non-Wildland/Non-Urban	621	$ 573,866	$ 294,283	$ 868,148
Urban Unzoned	26,974	$ 5,223,286	$ 2,310,932	$ 7,534,219
Grand Total	**108,345**	**$ 19,444,456**	**$ 7,181,567**	**$ 26,626,023**

Note:
1-The table above does not display loss estimation results; the table exhibits total value at risk based upon the hazard overlay and San Bernardino County Assessor data.
2- Parcel information is for all county parcels with greater than $20,000 in assessed parcel improvement value only. The San Bernardino County Assessor's roles only provide spatial information on assessed improvement and land values.

4.11.5.3 Critical Facilities at Risk

Critical facilities data were overlain with fire hazard severity zone data to determine the type and number of facilities within each risk classification. Table 4-24 lists the critical facilities in the wildfire hazard zone for Ontario.

Table 4-24: Critical Facility Exposure to Wildfire

Infrastructure Type	High	Very High	Total Feature Count
Essential Facility	0	0	0
EOC	0	0	0
Fire Station	0	0	0
Government Facility	0	0	0
Hospital	0	0	0
Police Station	0	0	0
School	0	0	0
High Potential Loss	8	0	8
Dam	0	0	0
Economic Element-Major Employer	0	0	0
Hazmat	6	0	6
Historic/Cultural Resource-Historic	0	0	0
Utility-Communication Facility	0	0	0
Utility-Electric Power Facility	0	0	0
Utility-Natural Gas Facility	0	0	0
Utility-Potable Water Facility	0	0	0
Utility-Waste Water Facility	0	0	0
Vulnerable Population-Adult Residential Care	0	0	0
Vulnerable Population-Child Care	2	0	2
Vulnerable Population-Flood Zone	0	0	0
Vulnerable Population-Foster/Home Care	0	0	0
Vulnerable Population-Mobile Home Park	0	0	0
Vulnerable Population-RV Park	0	0	0
Vulnerable Population-Senior Care	0	0	0
Transportation and Lifeline	0	0	0
Highway Bridge	0	0	0
Railway Bridge	0	0	0
Bus Facility	0	0	0
Rail Facility	0	0	0
Airport Facility	0	0	0
Grand Total	**8**	**-**	**8**

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4.11.6 Earthquake

Major Impacts from earthquakes are primarily the probable number of casualties and damage to infrastructure occurring from ground movement along a particular fault (USGS, 2009). The degree of infrastructure damage depends on the magnitude, focal depth, distance from fault, duration of shaking, type of surface deposits, presence of high groundwater, topography, and the design, type, and quality of infrastructure construction.

To analyze the risk to Ontario residents, the Great Shakeout scenario was chosen modeled by the California Integrated Seismic Network (CISN). The 2008 Great Southern California Shake Out was based on a potential magnitude 7.8 earthquake on the southern San Andreas Fault— approximately 5,000 times larger than the magnitude 5.4 earthquake that shook southern California on July 29, 2008. Such an earthquake will cause unprecedented damage to Southern California—greatly dwarfing the massive damage that occurred in Northridge's 6.7-magnitude earthquake in 1994. The hazard foot print for this scenario was used to develop exposure results for population, critical facilities, and single family residential parcel values. FEMA HAZUS analyses was used to conducted loss estimation for both scenarios and include building and content loss estimation results based on peak ground acceleration, peak ground velocity, and peak spectral acceleration modeled for the 7.8 earthquake on the San Andreas Fault.

Important to note: building codes provide one of the best methods of addressing natural hazards. When properly designed, and constructed per code, the average building can withstand many of the impacts of natural hazards. Hazard protection standards for all new and improved or repaired buildings can be incorporated into the local building code to reduce future flood losses.

The City of Ontario has adopted the following:

- 2013 California Building Code Standards
- 2016 City of Ontario Updated City Development Code
- 2016 California Green Building Standards Cal-Green

4.11.6.1 Population at Risk

According to the 2010 US Census, the population of jurisdiction is 164,000. Though rural residential construction is not particularly vulnerable to earthquakes, the chosen earthquake scenarios will directly or indirectly expose the entire population of Ontario to ground shaking. Depending on the time of day (the population differs based on employment opportunities) and exact location of the modeled epicenter, the earthquake scenarios could be experienced differently. Figure 4-45 exhibit the population totals in each modeled earthquake severity zone. Population location is based upon information taken during the 2010 U.S. Census.

Population Exposure

Population Count for Great Shakeout Scenario

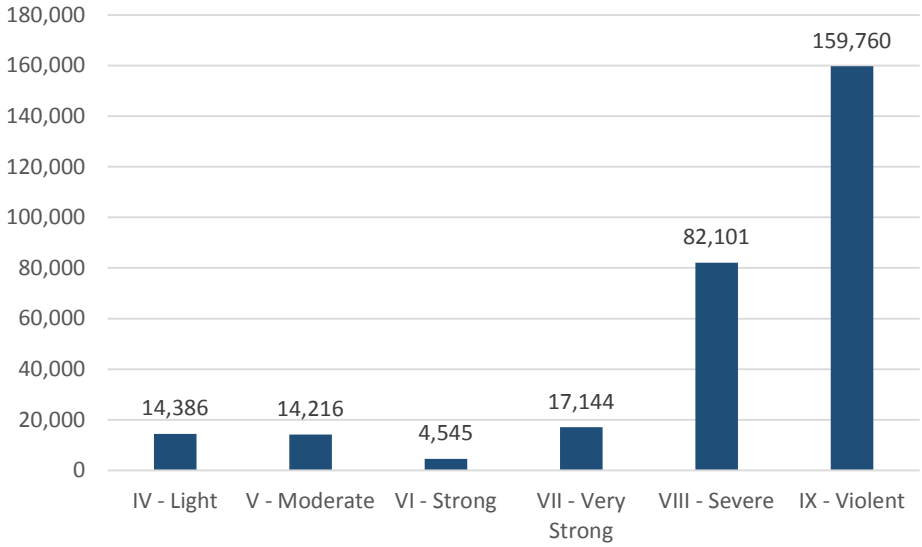


Figure 4-45: Population Exposure to The Great Shakeout EQ Shake Severity Zone

4.11.6.2 Residential Parcel Value at Risk

The County's parcel layer was used as the basis for the inventory of improved residential parcels. GIS was used to create centroids, or points, to represent the center of each parcel polygon – this is assumed to be the location of the structure for analysis purposes. The centroids were then overlaid with the shake severity zones to determine the at-risk structures. Only improved parcels greater than $20,000 were analyzed. The analysis indicates residential parcels the chosen scenario will experience similar, but different shaking patterns. The type and year of construction will greatly influence damage for structures subject to similar shaking. Table 4-25 show the count of at-risk structures and their associated improvement and land exposure values.

Table 4-25: Residential Parcel Value Exposure from Southern California Great Shakeout

Shake Severity Zone	Improved Parcel Count	Improvement Value Exposure ($000)	Land Value Exposure ($000)	Total Exposure ($000)
IV – Light	1,099	$ 181,952	$ 64,548	$ 246,499
V – Moderate	4,382	$ 485,082	$ 215,875	$ 700,956
VI – Strong	1,340	$ 142,763	$ 63,941	$ 206,704
VII - Very Strong	7,669	$ 824,794	$ 206,725	$ 1,031,519
VIII – Severe	46,889	$ 8,741,904	$ 3,039,484	$ 11,781,388
IX – Violent	46,974	$ 9,068,446	$ 3,591,379	$ 12,659,825
Grand Total	**108,345**	**$ 19,444,940**	**$ 7,181,951**	**$ 26,626,891**

4.11.6.3 Critical Facilities with Damage Potential

Earthquakes pose numerous risks to critical facilities and infrastructure. Seismic risks, or losses, that are likely to result from exposure to seismic hazards include:

- Casualties (fatalities and injuries).
- Utility outages.
- Economic losses for repair and replacement of critical facilities, roads, buildings, etc.
- Indirect economic losses such as income lost during downtime resulting from damage to private property or public infrastructure.

Roads or railroads that are blocked or damaged can prevent access throughout the area and can isolate residents and emergency service providers needing to reach vulnerable populations or to make repairs.

Linear utilities and transportation routes are vulnerable to rupture and damage during and after a significant earthquake event. The cascading impact of a single failure can have affects across multiple systems and utility sectors. Degrading infrastructure systems and future large earthquakes with epicenters near critical regional infrastructure could result in system outages that last weeks for the most reliable systems, and multiple months for others.

Table 4-26 provides an inventory of critical facility locations (points only) with earthquake exposure to the Great Shakeout Scenario. The building codes have been amended to include provisions for seismic safety at various bench marks years. Depending on "year built", each critical facility presented in the tables may have varying damage potential.

Table 4-26: Critical Facilities with EQ Risk Southern California Great Shakeout

Infrastructure Type	Violent Shake Zone (IX)	Severe Shake Zone (VIII)	Very Strong (VII)	Strong Shake Zone (VI)	Total Feature Count
Essential Facility	-	-	10	65	75
EOC	-	-	-	1	1
Fire Station	-	-	1	8	9
Government Facility	-	-	-	-	-
Hospital	-	-	-	6	6
Police Station	-	-	1	-	1
School	-	-	8	50	58
High Potential Loss	-	-	77	806	883
Dam	-	-	-	-	-
Economic Element-Major Employer	-	-	-	-	-
Hazmat	-	-	54	654	708
Historic/Cultural Resource-Historic	-	-	-	-	-
Utility-Communication Facility	-	-	3	47	50
Utility-Electric Power Facility	-	-	-	-	-
Utility-Natural Gas Facility	-	-	-	1	1

Infrastructure Type	Violent Shake Zone (IX)	Severe Shake Zone (VIII)	Very Strong (VII)	Strong Shake Zone (VI)	Total Feature Count
Utility-Potable Water Facility	-	-	1	40	41
Utility-Waste Water Facility	-	-	1	-	1
Vulnerable Population-Adult Residential Care	-	-	6	19	25
Vulnerable Population-Child Care	-	-	10	32	42
Vulnerable Population-Flood Zone	-	-	-	-	-
Vulnerable Population-Foster/Home Care	-	-	-	6	6
Vulnerable Population-Mobile Home Park	-	-	-	-	-
Vulnerable Population-RV Park	-	-	-	-	-
Vulnerable Population-Senior Care	-	-	2	7	9
Transportation and Lifeline	-	-	13	87	100
Highway Bridge	-	-	12	79	91
Railway Bridge	-	-	1	4	5
Bus Facility	-	-	-	-	-
Rail Facility	-	-	-	1	1
Airport Facility	-	-	-	3	3
Grand Total	**-**	**-**	**100**	**958**	**1,058**

4.11.6.4 HazMat Fixed Facilities

Although earthquakes are low probability events, they produce hazardous materials (HazMat) threats at very high levels when they do occur. Depending on the year built and construction of each facility containing HazMat, earthquake initiated hazardous material releases (EIHR) potential will vary. HazMat contained within masonry or concrete structures built before certain benchmark years reflecting code improvements may be of particular vulnerability.

4.11.6.5 Transportation

Earthquake events can significantly impact bridges which often provide the only access to some neighborhoods. Since soft soil regions generally follow floodplain boundaries, bridges that cross water courses are considered vulnerable. Since most of the Ontario bridges provide access across water courses, most are at least somewhat vulnerable to earthquakes. Key factors in the degree of vulnerability are the bridge's age and type of construction which indicate the standards to which the bridge was built. Special attention will be paid to the multiple bridges that cross interstates. Interstates would serve as major emergency response and evacuation routes.

4.11.6.6 Utilities

Linear utilities and transportation infrastructure would likely suffer considerable damage in the event of an earthquake. Due to the amount of infrastructure and sensitivity of utility data, linear utilities are difficult to analyze without further investigation of individual system components. Table 4-27 provide best available linear data and it should be assumed that these systems are exposed to breakage and failure.

Table 4-27: Critical Facilities (linear) Exposure

Facility Type	Strong (VI)	Very Strong (VII)	Severe (VIII)	Violent (IX)	Total Mileage
Transportation and Lifeline	0	0	87	532	619
Railway	0	0	1	17	19
Roads	0	0	85	514	600
Interstate Highway	0	0	5	27	32
State / County Highway	0	0	18	86	104
Primary Highway	0	0	0	11	11
Local Road, Major	0	0	39	73	111
Local Road	0	0	17	282	299
Other Minor Road	0	0	1	10	11
Vehicular Trail	0	0	0	0	0
Cul-de-Sac / Traffic Circle	0	0	2	0	2
Ramp	0	0	3	27	30
Service Road	0	0	0	0	0
Total	**0**	**0**	**87**	**532**	**619**

4.11.6.7 Loss Estimation Results

The HAZUS Level 2 analysis was used to assess the risk from and vulnerability to earthquake shaking within Ontario. Hazus buildings data is aggregated to the census tract level for earthquake models, known as the general building stock (GBS), which has a level of accuracy acceptable for planning purposes. Where possible the GBS was enhanced using GIS data from the county as described previously. The following sections describe risk to and vulnerability of the GBS within the Ontario. HAZUS calculates losses to structures from earthquake shaking by considering the amount of ground displacement and type of structure. The software estimates the percentage of damage to structures and their contents by applying established building fragility curves. Damage estimates are then translated to estimated dollar losses.

For each Great Shake Out Scenario ground shaking data (shakemaps) were acquired from CISN and imported into HAZUS. The shakemap data consist of peak ground velocity, peak ground acceleration, peak spectral acceleration at 0.3 seconds, and peak spectral acceleration at 1.0 seconds. The earthquake module operates on census tracts that often include population and structures in the incorporated cities and the unincorporated area within a single tract. Due to this fact the results include census tracts that have a substantial portion of land within the incorporated area (loss estimates for some tracts will include structures in incorporated cities).

The results are summarized in Table 4-28 for the Great Shake Out Scenario. It is important to understand that the HAZUS earthquake module uses the census tract as its enumeration unit rather than the more detailed census block. The loss estimation values for earthquakes are much higher than those of the flooding and dam failure due to this fact. The portions of incorporated areas included within boundary census tracts elevate the values due to the inclusion of additional GBS. Though the difference between census tracts and census blocks are extremely disparate, the most important summary information is the percent of loss estimation against the total value. Reading from the Figure 4-81, residential building and content loss estimation from the Great Shake Out Scenario is $ 36 billion dollars and 59 percent of the total value of the residential buildings. In Great Shake Out Scenario, residential damage will be the greatest. While there are several limitations to the FEMA HAZUS model, it does allow for potential loss estimation. It is important to remember that the replacement costs are well below actual market values, thus, the actual value of assets at risk may be significantly higher than those included herein.

Table 4-28: Great Shake Out Results

Building Type	Building Replacement Costs ($000)	Building Replacement Cost (% of Total Value)	Content Replacement Cost ($000)	Content Replacement Cost (% of Total Value)	Total Estimated Loss ($000)	Total Loss Estimation (% of Total Value)	Total Value ($000)
Agricultural	$21,069	9.9%	$6,775	3.2%	$27,844	13.1%	$212,946.00
Commercial	$1,289,182	14.5%	$375,695	4.2%	$1,664,877	18.8%	$8,878,505.00
Educational	$29,603	8.5%	$8,459	2.4%	$38,062	10.9%	$347,684.00
Government	$14,104	11.3%	$4,541	3.7%	$18,644	15.0%	$124,344.00
Industrial	$609,221	12.5%	$303,135	6.2%	$912,356	18.7%	$4,887,669.00
Religious	$46,528	11.5%	$13,683	3.4%	$60,210	14.9%	$404,834.00
Residential	$967,378	4.6%	$212,124	1.0%	$1,179,502	5.6%	$21,151,777
Grand Total	**$2,977,085**	**8.3%**	**$924,410**	**2.6%**	**$3,901,495**	**10.8%**	**$36,007,759**

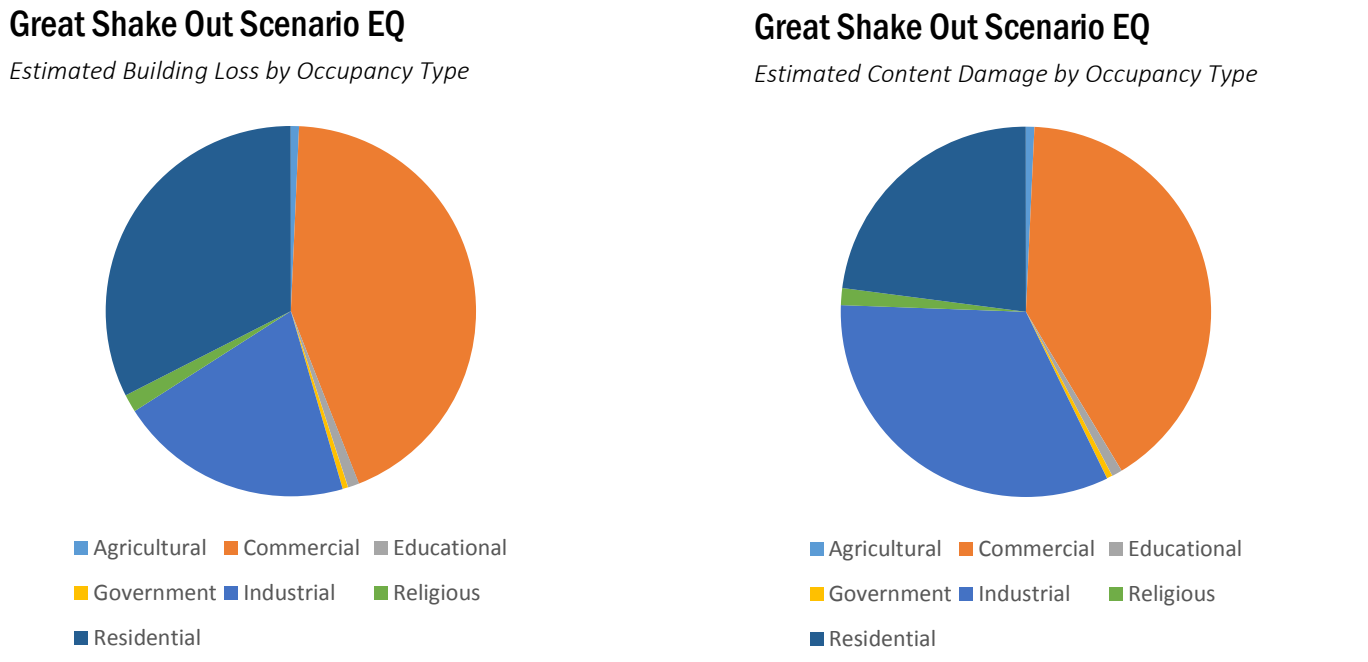


Figure 4-46: Estimated Building and Content Loss by Occupancy Type

4.11.7 High Winds Santa Ana Winds

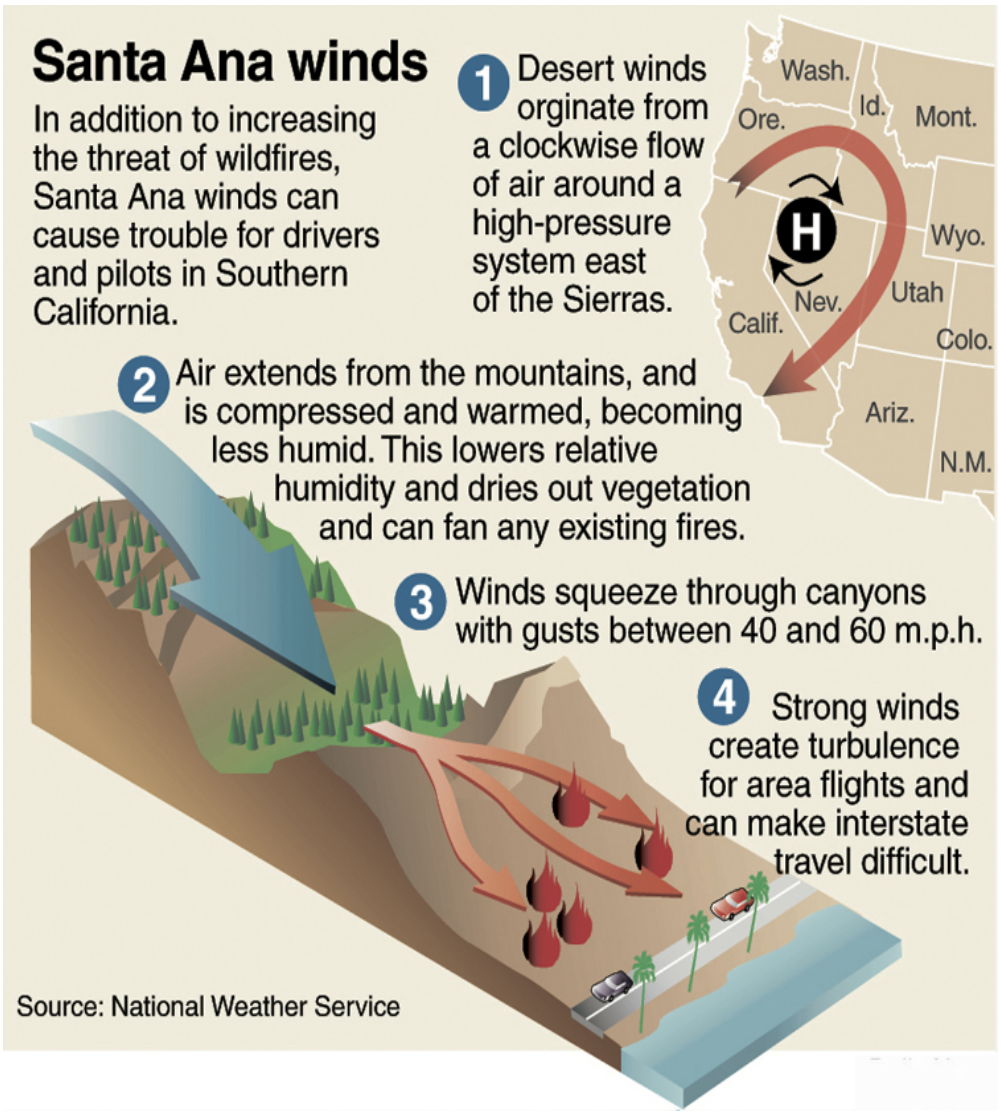
When conditions are right the winds come down through the mountain passes and can reach hurricane force and be sustained winds for days at a time.

4.11.7.1 Population at Risk

The entire city is at risk for damage from high winds.

4.11.7.2 Residential and Lifeline at Risk

It is difficult to estimate the damage from the Santa Ana Winds. The speed, direction, duration and how wet the ground is will determine the extent of damage. In 2011 nearby City of Pasadena had over 15 million dollars in damage from a single wind event lasting only a few hours. The most vulnerable are the power utility lines that are above ground and subject to stress from the winds.

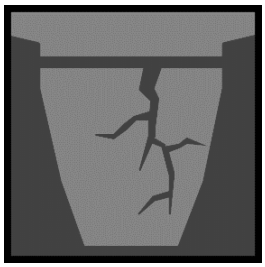


4.11.7.3 Critical Facilities at Risk

Critical facilities data were overlain with Santa Ana Wind hazard severity zone data to determine the type and number of facilities within each risk classification.

Figure 4-47: Photos by Daily Bulletin

4.11.8 Dam Failure



The only dam in the area is the San Antonio Dam in the City of Upland. The dam is 7 miles north of Ontario. There are numerous rock quarries and 2 below grade freeways between the dam and the City of Ontario. The risk is very small a wall of water would impact Ontario

The primary danger associated with dam failure is the high velocity flooding downstream of the dam and limited warning times for evacuation. Vulnerability varies by community and depends on the particular dam profile and the nature and extent of the failure. Vulnerable population is present directly below downstream elements of the dam, especially those incapable of escaping the area within the allowable time frame. This population includes the elderly and young who may be unable to self-evacuate from the inundation area. The vulnerable population also includes those who would not have adequate warning from a television or radio emergency warning system. Dam inundation zones created by Cal EMA were used to develop at risk populations and loss estimations for dam failure.

The most significant issue associated with dam failure involves the properties and populations in the inundation zones. Flooding because of a dam failure would significantly impact these areas. There is often limited warning time for dam failure. These events are frequently associated with other natural hazard events such as earthquakes, landslides, or severe weather, which limits their predictability and compounds the hazard. Important issues associated with dam failure hazards include the following:

- Federally regulated dams have an adequate level of oversight and sophistication in the development of emergency action plans for public notification in the unlikely event of failure; however, the protocol for notification of downstream citizens of imminent failure needs to be tied to local emergency response planning.
- Mapping for federally regulated dams is already required and available; however, mapping for non-federal-regulated dams that estimates inundation depths is needed to better assess the risk associated with dam failure from these facilities.
- Most dam failure mapping required at federal levels requires determination of the probable maximum flood. While the probable maximum flood represents a worst-case scenario, it is generally the event with the lowest probability of occurrence. Mapping of dam failure scenarios for non-federal-regulated dams that are less extreme than the probable maximum flood, but have a higher probability of occurrence, can be valuable to emergency managers and community officials downstream of these facilities. This type of mapping can illustrate areas potentially impacted by more frequent events to support emergency response and preparedness actions.
- The concept of residual risk associated with structural flood control projects should be considered in the design of capital projects and the application of land use regulations.
- Addressing security concerns and the need to inform the public of the risk associated with dam failure is a challenge for public officials.

4.11.8.1 Population at Risk

Populations located in a dam failure inundation zone can be exposed to the risk of a dam failure. The potential for loss of life is affected by the capacity and number of evacuation routes available to populations living in areas of potential inundation.

Population Exposure

Population Count in Dam Inundation Zone

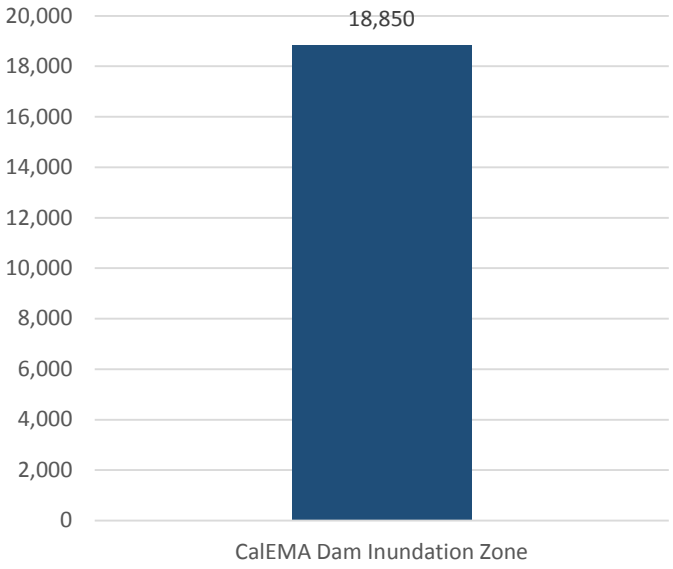


Figure 4-48: Population Exposed to Dam Failure Risk

4.11.8.2 Residential Parcel Value at Risk

The County's parcel layer was used as the basis for the inventory of improved residential parcels within the Cal-EMA Dam Inundation Zone. GIS was used to create centroids, or points, to represent the center of each parcel polygon – this is assumed to be the location of the structure for analysis purposes. The centroids were then overlaid with the dam failure layer to determine the flood risk for each structure. The dam inundation zone in which the centroid was located was assigned to the entire parcel. This methodology assumed that every parcel with a square footage value greater than zero was developed in some way. Only improved parcels greater than $20,000 were analyzed. Table 4-29 shows the count of at-risk structures and their associated building and content exposure values to dam failure.

The most vulnerable properties are those closest to the dam itself as they would experience the largest, most destructive surge of water. A total of $ 17,573,534 worth of buildings and contents are exposed to dam failure hazards within the Ontario Boundaries representing 2% of the total value.

Table 4-29: Parcel Values at Risk from Dam Inundation

Dam Inundation Zone	Improved Parcel Count	Improvement Value Exposure ($000)	Land Value Exposure ($000)	Total Exposure ($000)
Cal-EMA Dam Inundation Zone	32,654	$12,018,266	$5,555,268	$17,573,534

4.11.8.3 Critical Facilities at Risk

Critical Facilities at risk to dam inundation are on file with Ontario and for national security purposes can only be accessed through Public Works. As a general note, low-lying areas are vulnerable to dam inundation, especially transportation routes. This includes all roads, railroads, and bridges in the flow path of water. The most vulnerable critical facilities are those in poor condition that would have difficulty withstanding a large surge of water. Utilities such as overhead power lines and communication lines could also be vulnerable. Loss of these utilities could create additional compounding issues for emergency management officials attempting to conduct evacuation and response actions.

Table 4-30: Critical Infrastructure Exposure to Dam Failure

Infrastructure Type	Total Feature Count
Essential Facility	63
EOC	1
Fire Station	7
Government Facility	0
Hospital	6
Police Station	1
School	48
High Potential Loss	633
Dam	0
Economic Element-Major Employer	0
Hazmat	499
Historic/Cultural Resource-Historic	0
Utility-Communication Facility	38
Utility-Electric Power Facility	0
Utility-Natural Gas Facility	1
Utility-Potable Water Facility	20
Utility-Waste Water Facility	1
Vulnerable Population-Adult Residential Care	23
Vulnerable Population-Child Care	39
Vulnerable Population-Flood Zone	0
Vulnerable Population-Foster/Home Care	3
Vulnerable Population-Mobile Home Park	0
Vulnerable Population-RV Park	0
Vulnerable Population-Senior Care	9
Transportation and Lifeline	61
Highway Bridge	56
Railway Bridge	1
Bus Facility	0
Rail Facility	1
Airport Facility	3
Grand Total	**757**

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4.11.9 Climate Change

The City of Ontario enacted the Community Climate Change Action Plan to reduced greenhouse gasses. At the moment the two issues facing Ontario is water availability and temperature extremes. Drought will cause the City to ration water and enforce conservation policies. Temperature extremes will affect our vulnerable populations and could put our Emergency Medical Services on overload. EMS is already heavily used and an extended temperatures would dramatically increase the calls for service.

4.11.9.1 Population at Risk

Vulnerable populations should receive special attention when assessing the community's vulnerability to climate change. For example, care and sheltering during extreme heat conditions must be provided for vulnerable populations such as the elderly. According to information provided by FEMA, extreme heat is defined as temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks. Heat kills by taxing the human body beyond its abilities. In a normal year, about 175 Americans succumb to the demands of summer heat. According to the National Weather Service (NWS), among natural hazards, only the cold of winter—not lightning, hurricanes, tornados, floods, or earthquakes—takes a greater toll. In the 40-year period from 1936 through 1975, nearly 20,000 people were killed in the United States by the effects of heat and solar radiation. In the heat wave of 1980, more than 1,250 people died.

4.11.9.2 Loss Estimation Results

At the present time the City of Ontario would experience the lack of availability of water. That would require that conservation measures would be enacted as per city policies. Long periods of heat would require that facilities would remain open if needed to act as cooling centers to serve our vulnerable populations. Emergency Medical Systems would be taxed to the limit by calls for service to our vulnerable populations.

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4.11.10 Terrorism

Translating most manmade hazard profiles into meaningful geospatial information is difficult at best. Instead, the planning team will use an asset-specific approach. Population, facilities, systems and assets will be prioritized and assessed in this vulnerability assessment.

Special consideration should be given to areas with high density and those containing vulnerable populations (young, old, and those whose primary language is not English).

Facilities at high risk may include gathering places, critical facilities/ transportation and lifelines and utilities.

4.11.10.1 Population at Risk

Since terrorism can happen anytime, anywhere, 100% of the population is vulnerable to terrorism. In particular, people with access and functional needs, the elderly and the very young are especially vulnerable because they often rely heavily on others in their daily lives. Persons with English as a second language are also vulnerable as they may not receive warnings or notifications related to an incident in their primary language.

4.11.10.2 Critical Facilities Exposure

Critical facilities may include essential facilities (such as hospitals, police and fire stations, evacuation centers, etc), transportation systems, lifeline utility systems, high potential loss facilities (such as nuclear power plants, dams and military installations, etc), and hazardous material facilities.

Gathering facilities should also receive special attention. Places of mass gathering not only present terrorists with potential opportunities for mass casualties, symbolism and high impact media coverage, they pose a broad range of security challenges for their owners and operators. (Committe) The National Counter Terrorism Committee has noted that places of mass gathering have been specifically identified by religious and political extremists as attractive targets.

Places of mass gathering incorporate a diverse range of facilities including, but not limited to, sporting venues, shopping and business precincts, tourism/entertainment venues/attractions, hotels and convention centers, major events and public transport hubs. This also includes significant one off events.

Table 4-31: Critical Facilities Terrorism Vulnerability

Critical Facility Name	Rebuild cost	Priority	Vulnerability Rating by FEMA
Airport	271 million	3	4
Arena	147 million	4	4
Police Dep	25 million	2	4
Convention Center	70 million	4	4
Fire Stations	27 million	2	4
City Hall	35 million	2	4
Hospital	562 million	1	4
Ontario Mills	430 Million	4	4

Table 4-32: FEMA Vulnerability Rating

Criteria		
Very High	10	Very High – One or more major weaknesses have been identified that make the asset extremely susceptible to an aggressor or hazard. The building lacks redundancies/ physical protection and the entire building would be only functional again after a very long period of time after the attack.
High	8-9	High – One or more major weaknesses have been identified that make the asset highly susceptible to an aggressor or hazard. The building has poor redundancies/ physical protection and most parts of the building would be only functional again after a long period of time after the attack.
Medium High	7	Medium High – An important weakness has been identified that makes the asset very susceptible to an aggressor or hazard. The building has inadequate redundancies/ physical protection and most critical functions would be only operational again after a long period of time after the attack.
Medium	5-6	Medium – A weakness has been identified that makes the asset fairly susceptible to an aggressor or hazard. The building has insufficient redundancies/physical protection and most part of the building would be only functional again after a considerable period of time after the attack.
Medium Low	4	Medium Low – A weakness has been identified that makes the asset somewhat susceptible to an aggressor or hazard. The building has incorporated a fair level of redundancies/physical protection and most critical functions would be only operational again after a considerable period of time after the attack
Low	2-3	Low – A minor weakness has been identified that slightly increases the susceptibility of the asset to an aggressor or hazard. The building has incorporated a good level of redundancies/physical protection and the building would be operational within a short period of time after an attack.
Very Low	1	Very Low – No weaknesses exist. The building has incorporated excellent redundancies/physical protection and the building would be operational immediately after an attack.

Section 5. Community Capability Assessment

5.1 Active Mitigation Programs

Table 5-1: Current Mitigation Activities

Hazard	Department	Project
Wild fire	Code Enforcement	Weed abatement
Flooding	Utilities	Storm drain install in problem areas
Public Outreach	All Departments	Community events
All Hazards	Media Team	Emergency public notification social media
Climate Change	All Departments	Greenhouse Gas Reduction
Climate Change	Utilities	Ontario Water Wise program

5.2 Local Planning and Regulatory Capabilities (Supporting Possible Mitigation Activities)

The City of Ontario has various ways to expand and improve existing polices, programs and mitigation projects. Traditionally this can be done during the fiscal budget cycle in the Spring of each year when departments are building their next year budget. This works well when the project is ongoing or multi-year. Ontario also has a means to incorporate mitigation projects that needs to be quickly acted on like a Mitigation Grant opportunity. Once the grant or funding opportunity is identified the EMWC convenes and reviews what is applicable to the grant. If feasible the project is forwarded up to City administration to determine if the grant application should move forward. A good example of this process was a recent grant opportunity. The EMWC selected projects that were eligible. The EMWC then prioritized the projects by the method seen on pages 5-2 and 5-3. The project selected was the seismic valves on City water tanks. The City has shovel ready plans for the project and all that was needed was current price quotes. When those come in the project will be forwarded to City Administration for review and if approved submission of the grant to the State.

Most mitigation projects, unless mandated by law are subject to whether the City has funding for the project. In lean budget years it is doubtful any project could get funding unless a political champion has taken on the project. Budget and funding play a major role.

5.2.1 The Ontario Plan .....General Plan

The State of California recommends that the General Plan is updated every 10-20 years; depending mostly on whether or not the plan is meeting the community's needs. The Ontario Plan was last updated and adopted in 2010. There are nine (9) mandatory elements in a General Plan:

- Social Element,
- Environmental Element,
- Housing Element,
- Land Use Element,
- Environmental Element,
- Mobility,
- Community,
- Parks and Recreation, and
- Safety Element.

The Land Use Element of the General Plan establishes land use zoning districts that apply only to lands governed by the City; not for lands controlled by other jurisdictions or lands controlled by federal and state government The Land Use Element also describes land use compatibility for the primary Five (5) hazards: Geologic; Flood; Wind; Noise; and Fire.

In addition to the general plan, the information in Table 5-2 is used to construct mitigation actions aligned with existing planning and regulatory capabilities of the Ontario. Planning and regulatory tools typically used by local jurisdictions to implement hazard mitigation activities are building codes, zoning regulations, floodplain management policies, and other City programs or planning documents. These plans and regulations are linked and referenced to facilitate integration of activities in all hazards.

Table 5-2: Planning and Regulatory Capabilities

Hazard	Plan/Program/ Regulation	Responsible Agency	Comments
Multi-Hazard	California Building Codes	Building Dept.	Most Cities or Towns adopt the latest edition of the California Building Codes. The California Building codes protect buildings to the extent possible from natural occurring hazards. California Residential Code California Code of Regulations, Title 24, Part 2.5. California Building Code California Code of Regulations, Title 24, Part 2, Volumes 1 and 2. Communities may wish to add additional more restrictive building codes to the California Building Codes.

Hazard	Plan/Program/ Regulation	Responsible Agency	Comments
Multi-Hazard	Municipal Codes	Building Dept. or other.	Some communities may elect to adopted Division II of Chapter 1, Chapter 34, and Appendices B, C, F, G, H, I and J of the California Building Code and Division II of Part 1 of Chapter 1 and Appendix E of the California Residential Code.
Climate Change	Urban Water Management Plan (UWMP)	Utilities Dept. or others…	An UWMP may help define water delivery and water security.
Climate Change	2010 California Drought Contingency Plan	California Dept. of Water Resources	Section VI provides an overview of drought preparedness strategies from the California Water Plan Update (see separate entry). Section VII provides a brief description of local, utility, and State agency drought response roles. Situation and assessment reports will be distributed to appropriate agencies and will be posted on the DWR Drought website (www.water.ca.gov/drought).
Flood	Flood Resistant Construction	Public Works or other.	Appendix G of the 2013 California Building Codes stipulates existing Flood Resistant Construction standards.
Flood	NFIP Administration	Public Works Dept. or Other	NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in participating communities. As a participating member of the NFIP, the City is dedicated to protecting homes of more than 20 policies currently in force.
Flood	NFIP CRS	Public Works Dept. or Other	The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a voluntary program created by FEMA which began in late 1989 with the first communities entering the program in 1990. The CRS program provides reduced flood insurance premiums for policyholders in communities that go above and beyond the base requirements of the NFIP which also helps to better protect residents from the effects of damaging floods.
Climate Change	2014 Community Climate Change Action Plan	All departments	Planning for the reduction of Green House Gases

Hazard	Plan/Program/ Regulation	Responsible Agency	Comments
Climate Change	San Bernardino Associated Governments (SANBAG) San Bernardino County Regional Greenhouse Gas Emissions Inventories and Reduction Plan 2013	All Depts.	Reduce Green House Gas emissions
Climate Change	2010 Urban Water Management Plan	Utility	Water Conservation Emergency Water Conservation ordinance 2907
All Hazards	City Emergency Plan	All departments	SEMS, NIMS, and ICS plan for response and recovery in Ontario
Wild fire	Weed abatement	Code Enforcement	Reduce hazard by controlling weeds and grasses
All Hazards	Emergency Notifications	Media Team	Develop multiple means to get emergency information out to the public…..social media, mass notifications, Emergency Alert System.

5.3 Administrative and Technical Mitigation Capabilities

Table 5-3: Administrative and Technical Capabilities

Staff/Personnel Resources	Dept. / Agency	Comments
Planners (with land use / land development knowledge)	Public Works Dept., Community Development or other	
Planners or engineers (with natural and/or human caused hazards knowledge)	Public Works Dept., Utilities Dept., Community Development or other	Fire Prevention can assist as well.
Engineers or professionals trained in building and/or infrastructure construction practices (includes building inspectors)	Public Works Dept., Utilities Dept., Community Development or other	

Staff/Personnel Resources	Dept. / Agency	Comments
Floodplain Management	Public Works	If your community is a participant in the NFIP a Floodplain Administration must be identified and trained for FEMA's NFIP program.
Land / Building surveyors	Public Works or Other…	City contracts out land surveying services.
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program	Public Works and IT	
Grant writers or fiscal staff to handle large/complex grants	Public Works Dept., Utilities Dept., Community Development and other	Numerous types of federal, state, local, and private grants have been administered for mitigation at the local level in California. .
Construction Equipment	Public Works Dept. or other.	Most Public Works departments owns and maintains large pieces of equipment available for construction and moving and removal of earthen material
Emergency Management Personnel	Police Department, Fire Departments.	State Office of Emergency Services Access Mobile Emergency Personnel
Care and Sheltering	Regional Red Cross Personal (local office in 10600 Trademark Parkway, Suite 406 Rancho Cucamonga, CA 91730	Care and sheltering during extreme heat conditions, will provide sheltering and support services for fire victims.

5.4 Local Fiscal Capabilities

Table 5-4: Local Fiscal Capabilities

Financial Resources	Dept. / Agency	Comments
Permitting Fees	Development Services, Planning Dept., Building Dept. or other	Development fees, community service, etc.

Financial Resources	Dept. / Agency	Comments
General Fund Revenue	City Council or Other	In most cases, there is no dedicated budget line items for hazard mitigation, budget is just balanced meeting mandated reserves and operating costs.
Utility Funds	Utilities Dept. or other…	
Capital Improvements Program	City Council, Public Works or other.	CIPs should have infrastructure improvements with mitigation benefits. Most improvements have some degree of hazard mitigation benefits.
State and County Community Development Dept. Block Grants (CDBG)	California Dept. of Housing and Community Development Dept. (HCD)	Programs Include: Community Development (CD) Economic Development (ED) Disaster Recovery Initiative (DRI) Neighborhood Stabilization Program (NSP)
Home Investments Partnership Program	California Dept. of Housing and Community Development	Must apply competitively for grant funds.

5.5 City of Ontario Capabilities

5.5.1 Multi-Hazard Capabilities

Table 5-5: Multi-Hazard Capabilities

Hazard	Plan/Program/ Regulation	Responsible Agency	Comments
Multi-Hazard	Public Out reach	Fire District	Ongoing programs on preparedness and mitigation

5.5.2 City Wildfire Mitigation Programs

Table 5-6: City Wildfire Mitigation Programs

Hazard	Program	Responsible Agency	Comments
Wildfire	City Fire Hazard Abatement	Fire Department Code Enforcement	Fire Hazard Abatement works to reduce the potential for an individual's property to be the source of fire and structural ignitability. For more information see County OES website or hazard mitigation plan.
Wildfire	Southern California Edison (SCE)	Southern California Edison (SCE)	SCE removes dead trees near power lines to reduce fire hazards. For more information see County OES website or hazard mitigation plan.
Wildfire	Inland Empire Fire Safe Alliance	Inland Empire Fire Safe Alliance	The Alliance was created to act as a forum for all Fire Safe Councils in San Bernardino County.
Wildfire	Organized Group Volunteer Activities	Fire Department Police Department	There are several volunteer citizen groups throughout the City that are capable of providing significant resources that are not provided by traditional governmental agency services. For more information see City web site.

5.5.3 City Flood Mitigation Programs

Table 5-7: City Flood Mitigation Programs

Hazard	Program	Responsible Agency	Comments
Flood	National Flood Insurance Program	Public Works	Ongoing outreach for the public to purchase flood insurance

5.5.4 Ontario Public Education and Alert Programs

Table 5-8: Ontario Public Education and Alert Programs

Hazard	Program	Responsible Agency	Comments
Multi-Hazard	CERT	Fire Department	The Community Emergency Response Team (CERT) Program educates people about disaster preparedness and trains them in basic response skills.
Multi-Hazard	Everbridge Nixle Ready Ontario	Media Team	Alerting systems for the city. Phone, e-mail and text are the methods used. Also has a response mode so that message can be acknowledged.
Multi-Hazard	ECS	Fire Department	The Emergency Communications Service (ECS) is a volunteer group providing front-line communications, technical and logistical support to the Fire Department. Their primary mission is to support Fire, Government and other local agencies in time of disaster. In addition, ECS has provided telecommunications and event support to other departments including Public Works, Parks, Recreation, Urban Search and Rescue and other City Departments.

5.6 State and Federal Fiscal Resources

Table *5-9*: Potential Funding Programs/Grants from State and Federal Agencies

Agency / Grant Name	Potential Programs/Grants
California DWR Proposition 50/84: **Integrated Regional Water Management (IRWM) Program.**	**DWR has a number of IRWM grant program funding opportunities. Current IRWM grant programs include planning, implementation, and storm water flood management.** http://www.water.ca.gov/irwm/grants/index.cfm Proposition 84, the Safe Drinking Water, Water Quality, and Supply, Flood Control, River and Coastal Protection Bond Act, which provides $1,000,000,000 (P.R.C. §75001-75130) for IRWM Planning and Implementation. CA Dept. of Water Resources' Flood Emergency Response Projects are posted on the webpage at: http://www.water.ca.gov/floodmgmt/hafoo/fob/floodER/
California Housing and Community Development (HCD) Emergency Solutions Grant (ESG) Program	To fund projects that serve homeless individuals and families with supportive services, emergency shelter/transitional housing, assisting persons at risk of becoming homeless with homelessness prevention assistance, and providing permanent housing to the homeless population. The Homeless Emergency Assistance and Rapid Transition to Housing (HEARTH) Act of 2009 places new emphasis on assisting people to quickly regain stability in permanent housing after experiencing a housing crisis and/or homelessness. http://www.hcd.ca.gov/fa/esg/index.html
CalTrans Division of Local Assistance / Safe Routes to School Program	California Dept. of Transportation. Federal funding administered via Caltrans. Local 10% match is the minimum requirement. http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm
California State Office of Historic Preservation (OHP) / Statewide Historic Preservation Plan	Local Government**;** OHP's Local Government Unit (LGU) offers guidance and assistance to city and county governments to preserve historic properties including damage from natural hazards.
U.S. Dept. of Energy / Energy Efficiency and Conservation Block Grant Program	Provides funding for weatherization of structures and development of building codes/ordinances to ensure energy efficiency and restoration of older homes. http://www1.eere.energy.gov/wip/eecbg.html
Dept. of Homeland Security (DHS) / FEMA Grants	For more information on current grants visit: http://www.fema.gov/grants

Agency / Grant Name	Potential Programs/Grants
Office for Victims of Crime: **Antiterrorism and Emergency Assistance Program (AEAP)**	The Office for Victims of Crime supports communities responding to terrorist attacks and cases of mass violence. The AEAP Assistance Programs include crisis response, consequence management, criminal justice support, crime victim compensation and training and technical assistance. More information can be obtained at: https://www.ovc.gov/AEAP/
U.S. Department of State Office of Antiterrorism Assistance (ATA): **Antiterrorism Assistance Program**	Antiterrorism Assistance Program The ATA program trains civilian security and law enforcement personnel from friendly governments in police procedures that deal with terrorism. Since its inception in 1983, the program has trained and assisted over 84,000 foreign security and law enforcement officials from 154 countries. Learn more by visiting: http://www.state.gov/m/ds/terrorism/c8583.htm
California Emergency Management Agency (Cal OES) / Proposition 1B Grants Programs	The Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, approved by the voters as Proposition 1B at the November 7, 2006 general election, authorizes the issuance of nineteen billion nine hundred twenty-five million dollars ($19,925,000,000) in general obligation bonds for specified purposes, including grants for transit system safety, security, and disaster response projects. http://www.calema.ca.gov/EMS-HS-HazMat/Pages/Emergency-Management-Homeland-Security-and-Hazard-Mitigation-Grant-Programs.aspx
California Proposition 1: **The Water Bond (AB 1471)**	Authorize $7.545 billion in general obligation bonds for state water supply infrastructure projects, such as public water system improvements, surface and groundwater storage, drinking water protection, water recycling and advanced water treatment technology, water supply management and conveyance, wastewater treatment, drought relief, emergency water supplies, and ecosystem and watershed protection and restoration. The State Water Resources Control Board (State Water Board) will administer Proposition 1 funds for five programs. The estimated implementation schedule for each is outlined in Five Categories: ▪ Small Community Wastewater ▪ Water Recycling ▪ Drinking Water ▪ Storm water ▪ Groundwater Sustainability http://www.waterboards.ca.gov/water_issues/programs/grants_loans/proposition1.shtml

Agency / Grant Name	Potential Programs/Grants
Assistance to Firefighters Grant Program (AFG); Fire Prevention and Safety (FP&S)	The primary goal of the FP&S Grants is to enhance the safety of the public and firefighters with respect to fire and fire-related hazards. The Grant Programs Directorate administers the FP&S Grants as part of the AFG Program. FP&S Grants are offered to support projects in two activity areas: 1). Fire Prevention and Safety (FP&S) Activity Activities designed to reach high-risk target groups and mitigate the incidence of death and injuries caused by fire and fire-related hazards. 2). Research and Development (R&D) Activity To learn more about how to prepare to apply for a project under this activity, please see the FP&S Research and Development Grant Application Get Ready Guide. https://www.fema.gov/fire-prevention-safety-grants FY 14 Awards: https://www.fema.gov/fire-prevention-safety-grants-award-year-2014

5.7 The Budget in Brief

5.7.1 2016-2017 Budget Highlights

Fiscal Year 2016-2017 City Council Goals

PRIMARY GOAL

Regain Local Control of the Ontario International Airport

SUPPORTING GOALS

- Invest in the Growth and Evolution of the City's Economy
- Maintain the Current High Level of Public Safety
- Operate in a Businesslike Manner
- Pursue City's Goals and Objectives by Working with Other Governmental Agencies
- Focus Resources in Ontario's Commercial and Residential Neighborhoods
- Invest in the City's Infrastructure (Water, Streets, Sewers, Parks, Storm Drains and Public Facilities)
- Encourage, Provide or Support Enhanced Recreational, Educational, Cultural and Healthy City Programs, Policies and Activities
- Ensure the Development of a Well Planned, Balanced, and Self-Sustaining Community in the New Model Colony

2016-2017 Budget accounts are on the following pages.

	2013-14 Actual	2014-15 Actual	2015-16 Adopted Budget	2015-16 Current Budget	2016-17 Adopted Budget	% Change to Adopted Budget 2015-16
Personnel Services						
51010 Salaries-Full Time	$ 58,561,229	$ 62,474,082	$ 68,687,699	$ 68,708,114	**$ 73,918,562**	7.6%
51020 Salaries-Temporary/Part Time	1,607,807	1,770,351	2,245,646	2,261,638	**2,327,897**	3.7%
51030 Salaries-Overtime	11,666,787	13,004,877	11,567,527	13,085,527	**12,348,682**	6.8%
51100 Fringe Benefits	40,685,051	43,769,243	49,768,678	49,935,489	**54,736,704**	10.0%
51210 Auto Allowance	112,752	109,254	113,551	113,551	**105,999**	-6.7%
51310 Uniform Allowance	462 726	421,696	436 229	441 929	**462 622**	6.1%
Total Personnel Services	$ 113,096,352	$ 121,549,503	$ 132,819,330	$ 134,546,248	**$ 143,900,466**	8.3%
Operating Expenditures						
52010 Computer Supplies	$ 35,786	$ 32,578	$ 24,275	$ 24,275	**$ 31,675**	30.5%
52020 Office Supplies	249,513	249,571	332,699	332,699	**334,073**	0.4%
52030 Books/Publications	43,218	27,642	39,110	39,110	**41,727**	6.7%
52031 Library Books Adult	143,331	123,806	106,000	106,000	**96,000**	-9.4%
52032 Library Books Children	86,702	105,611	131,500	131,500	**153,000**	16.3%
52033 Magazines/Periodicals	20,613	21,983	30,325	30,325	**30,325**	0.0%
52034 Media	75,981	57,108	102,500	102,500	**100,500**	-2.0%
52050 Uniforms	215,602	181,859	202,955	207,076	**202,955**	0.0%
52110 Materials	1,148,194	1,021,606	1,451,178	1,660,411	**1,658,168**	14.3%
52120 Fuel & Oil	302,069	348,115	194,250	291,250	**396,250**	104.0%
52140 Chemicals	20,076	19,655	28,000	28,000	**28,000**	0.0%
52160 Equipment Under $15,000	294,035	342,810	422,990	434,335	**665,290**	57.3%
52190 Misc Materials/Supplies	1,025,550	1,128,883	1,049,222	1,090,981	**1,112,138**	6.0%
52210 Maintenance & Repairs	978,606	1,418,008	1,631,154	1,709,813	**1,700,548**	4.3%
52310 Electric Services	2,196,670	2,469,467	2,414,033	2,414,033	**2,414,033**	0.0%
52320 Natural Gas Services	76,322	59,703	93,632	93,632	**97,362**	4.0%
52330 Telecommunication Services	279,191	266,896	400,432	400,432	**398,945**	-0.4%
52341 City Utilities Service	1,491,841	1,363,110	1,713,714	1,713,714	**1,713,714**	0.0%
52410 Advertising/Promotional	760,826	854,262	831,655	941,287	**852,530**	2.5%
52510 Travel/Conference/Training	591,570	685,055	751,204	759,704	**816,716**	8.7%
52520 Dues and Memberships	163,434	171,272	199,199	199,199	**220,119**	10.5%
52530 Employee Education	5,348	4,252	10,300	10,300	**11,000**	6.8%
52610 Rental/Lease Expense	4,269,058	5,062,146	5,041,200	5,056,264	**5,044,072**	0.1%
52710 Duplicating Expense	90,804	79,247	131,645	136,144	**141,985**	7.9%
52720 Postage Expense	417,583	421,291	459,660	459,660	**464,400**	1.0%
52740 Landfill Disposal	46,613	43,924	51,510	51,510	**52,510**	1.9%
52990 Miscellaneous Services	2,467,079	2,670,705	2,785,007	3,030,288	**2,921,918**	4.9%
52991 Maintenance Services	1,420,410	1,660,174	1,918,688	1,952,284	**1,975,036**	2.9%

2016-17 General Fund Summary

	2013-14 Actuals	2014-15 Actuals	2015-16 Adopted Budget	2015-16 Current Budget	2016-17 Adopted Budget	% Change to Adopted Budget 2015-16
REVENUES						
Sales Tax	$ 69,967,633	$ 77,496,371	$ 71,000,000	$ 71,000,000	**$ 74,000,000**	4.2%
Property Tax	44,294,879	47,733,803	44,750,000	47,750,000	**51,000,000**	14.0%
Development Related	7,799,437	10,217,436	6,734,988	7,733,114	**6,785,000**	0.7%
Business Related:						
Business License Tax	6,405,595	6,825,185	6,400,000	6,400,000	**6,450,000**	0.8%
Occupancy Tax	10,614,157	12,057,576	10,900,000	11,300,000	**12,500,000**	14.7%
Parking Tax	2,988,135	3,126,753	2,700,000	2,700,000	**2,800,000**	3.7%
Franchises	3,251,592	3,476,151	3,200,000	3,200,000	**3,250,000**	1.6%
Interest & Rentals	1,802,996	1,608,544	1,777,930	1,777,930	**1,825,140**	2.7%
Other:						
Motor Vehicle License Fees	0	71,526	0	0	**0**	0.0%
Recreation Program	902,823	964,131	896,300	896,300	**901,000**	0.5%
Miscellaneous Revenues	5,266,069	6,183,402	4,814,295	4,959,295	**7,971,169**	65.6%
Reimbursables	3,559,997	3 628 614	2 448 717	3 591 717	**2 648 021**	8.1%
Total Revenues	$ 156,853,313	$ 173,389,492	$ 155,622,230	$ 161,308,356	**$ 170,130,330**	9.3%
Transfers-In	$ 32,769,412	$ 28,114,147	$ 36,753,002	$ 56,974,084	**$ 35,038,670**	-4.7%
TOTAL REVENUES & TRANSFERS-IN	**$ 189 622 725**	**$ 201 503 639**	**$ 192 375 232**	**$ 218 282 440**	**$ 205 169 000**	6.7%
EXPENDITURES						
Personnel / Services	$ 113,096,352	$ 121,549,503	$ 132,819,330	$ 134,546,248	**$ 143,900,466**	8.3%
Operating Expenditures	20,923,349	23,170,853	24,589,835	57,629,974	**26,046,733**	5.9%
Contractual Services	7,249,558	8,233,148	8,127,660	10,315,447	**8,647,291**	6.4%
Internal Service Allocations	18,405,434	18,656,363	19,096,475	19,123,768	**19,591,327**	2.6%
Debt Service & Capital Outlay	297 032	30 390	4 346 290	7 754 290	**1 072 290**	-75.3%
Total Expenditures	$159,971,725	$171,640,257	$188,979,590	$229,369,727	**$199,258,107**	5.4%
Transfers-out	$ 10,443,004	$ 11,248,205	$ 3,395,642	$ 8,367,705	**$ 6,029,933**	77.6%
TOTAL EXPENDITURES & TRANSFERS-OUT	**$ 170,414,729**	**$ 182 888 462**	**$ 192 375,232**	**$ 237,737 432**	**$ 205,288,040**	6.7%

Section 6. Mitigation Strategy

6.1 Mitigation Overview

The intent of the mitigation strategy is to provide Ontario with a guidebook to future hazard mitigation administration. The mitigation strategy is intended to reduce vulnerabilities outlined in the previous section with a prescription of policies and physical projects. This will help City of Ontario staff to achieve compatibility with existing planning mechanisms and ensures that mitigation activities provide specific roles and resources for implementation success.

6.2 Mitigation 5 Year Progress Report

Table 6-1 is a list of specific projects that were listed in the 2011 HMP in section 6.5. The status of these projects are identified in the far right column in red.

Table 6-1: 2011 HMP Projects

Action	Lead	Funding Source	Timeframe	Priority	2016 Status
Ensure all new development and redevelopment is sited and constructed in accordance with the Ontario Plan and zoning.	Development	Local	Long	C	**Ongoing**
Implement specific projects	Redevelopment Development, OMUC, OEM, IT, other	Local, grant	Long	C	**Deferred due to budget reductions**
Conduct a risk assessment of the City's water treatment plant and City reservoirs	OMUC	Local	Short	C	**Completed**
Conduct a city wide assessment of City employee earthquake preparedness	OEM	Local	Short	C	**Ongoing**
Establish a nonstructural hazard evaluation and risk reduction program for city buildings and departments housing critical functions	OMUC	Local	Short	C	**Ongoing**
Improve damage assessment process and procedures	OEM, OMUC, CPS	Local	Short	C	**Ongoing**
Improve the building and infrastructure inventory for HAZUS	OMUC	Local, Grant	Short	C	**Ongoing**
Develop the primary Emergency Operations Center	Development	Local, Grant	Short	C	**Completed**
Conduct an assessment of City facility seismic hardening	OMUC	Local	Long	H	**Ongoing**
Perform assessment of city parks for mass care locations	OMUC, OEM	Local	Short	H	**Project taken over by the American Red Cross**
Update Disaster Council	OEM	Local	Short	H	**Completed**

Action	Lead	Funding Source	Timeframe	Priority	2016 Status
Continue comprehensive emergency training for all city personnel	OEM	Local	Long	H	**Ongoing**
Continue comprehensive emergency exercises for all city personnel	OEM	Local	Long	H	**Ongoing**
Evaluate City facility warning systems to determine efficacy in reaching all people within the building	IT	Local	Short	H	**Completed**
Assess City facility evacuation/shelter in place procedures	OEM	Local	Short	H	**Ongoing**
Update the mass notification system	IT	Local, Grant	Long	H	**Complete**
Create emergency management website	IT	Local	Short	H	**Complete**
Continue to sponsor annual Community Emergency Preparedness Fair	OEM	Local, Grant	Long	H	**Ongoing**
Enhance Emergency Management Working Committee membership	OEM	Local	Long	M	**Complete**
Improve emergency management public education material distribution	OEM	Local	Long	M	**Ongoing**

Lead agency listing:
Development: Development Agency
OMUC: Ontario Municipal Utilities Company
OEM: Office of Emergency Management
IT: Information Technology Department

6.3 Identifying the Problem

Table 6-2: Problem Statements

Problem Description	Problem Type	Action No.
1. **Wildfire**	Control Fuel growth	6.4.2
2. **Flood**	Urban street flooding due to undersized storm drains	6.4.4
3. **Santa Ana Winds**	Power to critical facilities	6.4.8
4. **Terrorism**	Harden possible targets	6.4.6
5. **Earthquake**	Public education on how to reduce hazards	6.4.3
6. **Climate Change**	Reduce greenhouse gasses	6.4.7
7. **Dam Inundation**	NFIP and update maps	6.4.5

6.4 Mitigation Goals, Objectives, and Projects

6.4.1 Goals and Objectives

6.4.1.1 All Hazard (AH)

GOAL: Increase readiness for all hazards in the City of Ontario. (Complements General Plan Safety Element S-8)

OBJECTIVE 1: Develop a robust community outreach team to promote emergency preparedness and hazard mitigation activities.

OBJECTIVE 2: Develop a volunteer cadre to include CERT (Community Emergency Response Teams), Ham Radio Operators and faith based organizations

6.4.1.2 Wildfire (WF)

GOAL: Continue to reduce fire hazards in the City of Ontario. (Compliments General Plan Safety Element S-3)

WILDFIRE OBJECTIVE 1: Through Code Enforcement enforce the weed abatement program to reduce fuels available to burn

6.4.1.3 Earthquake/Geologic Hazards (EQ)

GOAL: Minimize exposure to structural and contents damage from geologic and seismic conditions. (Complements General Plan Safety Element S-1 and S-8)

EARTHQUAKE OBJECTIVE 1: Educate the public on reducing earthquake risk.

> **EQ Action 1.1:** Improve public education programs and practices to residents for earthquake risk.

6.4.2 Flood (FL)

GOAL: Provide adequate flood protection to minimize hazards and structural damage. (General Plan Safety Element Goal S-2)

FLOOD OBJECTIVE 1: National Flood Insurance Program. Participate in the National Flood Insurance Program (NFIP), which provides flood insurance within designated floodplains.
(General Plan Safety Element, Policy S-5)

> **FL Action 1.1:** Update NFIP data and maps with newly identified flood hazard areas in the County, as new information becomes available.

FL Action 1.2: Develop flood control projects to reduce urban flooding for the following areas:

1) Mountain Avenue – Phillips St to Philadelphia St./Cypress-Sultana Channel
2) Fifth Street – Fourth St./Corona Ave. to El Dorado Ave.
3) San Antonio Avenue – Francis St. to Cypress Channel
4) Parco Avenue - SR-60 Pomona Freeway to Riverside Dr.
5) Grove Avenue - SR-60 Pomona Freeway to Riverside Dr.
6) Cucamonga Avenue - SR-60 Pomona Freeway to Riverside Dr.
7) Bon View Avenue - SR-60 Pomona Freeway to Riverside Dr.
8) Campus Avenue – Cedar St. to Riverside Dr.
9) Sultana Ave. – Phillips St. to Philadelphia St.
10) Campus Avenue & Mission Boulevard – State St. to Francis St. & Cucamonga Ave. to Grove Ave.
11) San Antonio Avenue & Phillips Street – Francis St. to Phillips St. & San Antonio Ave. to Euclid Ave.
12) G Street & Allyn Avenue – Allyn Ave. to West Cucamonga Channel & G St. to Fifth St.

6.4.2.1 Dam Inundation (DI)

GOAL: Reduce damage from a breach in the San Antonio Dam. (General Plan Safety Element S-2)

DAM OBJECTIVE 1: Have Army Corps of Engineers review the inundation zones to reflect the retention basins, quarries, 2 subterranean freeways that now exist between the city and the dam

DAM OBJECTIVE 2: Promote the National Flood Insurance Program

6.4.2.2 Anti-Terrorism (AT)

GOAL: Use antiterrorism strategies to discourage terrorism and protect the people, infrastructure and assets in Ontario from the effects of terrorism. (Compliments General Plan Safety Element S-7)

ANTI-TERRORISM OBJECTIVE 1: Use anti-terrorism design strategies to discourage / prevent acts of terrorism.

AT Action 1.1: Identify and prioritize mitigation activities (anti-terrorism force protection) at critical facilities and gathering places that are vulnerable to terrorist attacks.

6.4.2.3 Climate Change (CC)

GOAL: Reduce the impacts of climate change on the City and limit human activities that change the atmosphere's makeup.

CLIMATE CHANGE OBJECTIVE 1: Meet greenhouse gas (GHG) reductions targets set forth by the Clean Air Act and The City's Community Climate Change Plan and the General Plan Environmental Element Section ER

CC Action 1.1: Continue working with the South Coast Air Quality Management District to meet GHG reductions targets.

CC Action 1.2: Continue implementing the energy conservation and efficiency measures identified in the County of San Bernardino Greenhouse Gas Emissions Reduction Plan, and the City Community Climate Change Plan

6.4.2.4 Santa Ana Winds (SW)

GOAL: Reduce risk of injury, property damage and economic loss resulting from Santa Ana Winds and wind related hazards. (Compliments the General Plan Safety Element S-5)

Santa Ana Wind Objective 1: Require back up power at critical facilities (Safety Element S5-1)

Santa Ana Wind Objective 2: Dust control and grading in high winds (Safety Element S5-2 and S5-3)

Table 6-3: Implementation Strategy Summary

Action	Lead Agency	Hazard	Funding Source
Prevention (PRV): **Preventative activities are intended to keep hazard problems from getting worse, and are typically administered through government programs or regulatory actions that influence the way land is developed and buildings are built. This includes the development of additional code requirements to further reduce or eliminate damages from the identified hazards.**	Planning Department	All Hazards	General Fund, Fees
Property Protection (PPRO): **Property protection measures involve the modification of existing buildings and structures to help them better withstand the forces of a hazard, or removal of the structures from hazardous locations.**	Planning	All Hazards	General Fund, Grants, Fees
Public Education and Awareness (PE&A): **To continue and develop new public education programs targeting the top identified hazards.**	Fire Department Emergency Management	All Hazards	General Fund, Grants
Emergency Services (ES): **Although not typically considered a "mitigation" technique, emergency service measures do minimize the impact of a hazard event on people and property. These commonly are actions taken immediately prior to, during, or in response to a hazard event.**	Fire Department Emergency Management	All Hazards	General Fund, Special District Funds, Grants

Action	Lead Agency	Hazard	Funding Source
Structure Protection (SP) – Flooding **To continue to identify, fund, and build projects that reduce or eliminate flood hazards in the City.**	Utilities	Flooding Hazards	General Fund, Grants, Fees
Structure Protection (SP)– Geological Hazards **To identify unknown hazards and develop additional new and retrofit requirements or programs to reduce or eliminate damage from geological hazards.**	Planning	Geological Hazards	General Fund, Fees, Grants
Structure Protection (SP) – Wildfire **To further protect structures at risk from wildfire through education, building, and enforcement codes and actions.**	Code Enforcement	Wildfire	General Fund, Fees, Grants

6.5 Mitigation Priorities

6.5.1 Prioritization Process

6.5.1.1 Public Input for Mitigation Prioritization

Public input is an essential step in validating the prioritization of mitigation actions. Valuable information was gathered regarding the perception of hazard threats to residents through community meeting and public events.

The community survey found that most had experience an earthquake within the past 10 years within the City of Ontario, and most had experienced street flooding. When asked which hazards would be very likely to cause damage to buildings or harm residents in the City, respondents believed earthquake, fire, winds, and high heat were the most likely to occur.

The survey also investigated the incentives needed to convince residents to perform mitigation actions around their homes. The majority of those asked said they weren't sure how much they'd be willing to spend at one time to protect their home or business from natural hazards, and very few said they'd be willing to spend more than $1,000. The top incentives that would encourage the survey participants to protect their home against natural hazards were grants, insurance premium discounts, property tax breaks or incentives, and a "rebate" program. This community feedback was taken into consideration when prioritizing mitigation actions.

Mitigation Action Evaluation Worksheet

Ontario used this worksheet to help evaluate and prioritize each mitigation action being considered by the EMWC and the public. For each action, evaluate the potential benefits and/or likelihood of successful implementation for the criteria defined below.

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

1 = Highly effective or feasible

0 = Neutral

-1 = Ineffective or not feasible

Example Evaluation Criteria

Life Safety – How effective will the action be at protecting lives and preventing injuries?

Property Protection – How significant will the action be at eliminating or reducing damage to structures and infrastructure?

Technical – Is the mitigation action technically feasible? Is it a long-term solution? Eliminate actions that, from a technical standpoint, will not meet the goals.

Political – Is there overall public support for the mitigation action? Is there the political will to support it?

Legal – Does the community have the authority to implement the action?

Environmental – What are the potential environmental impacts of the action? Will it comply with environmental regulations?

Social – Will the proposed action adversely affect one segment of the population? Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower income people?

Administrative – Does the community have the personnel and administrative capabilities to implement the action and maintain it or will outside help be necessary?

Local Champion - Is there a strong advocate for the action or project among local politicians or community group

Mitigation action	Life Safety	Property Protection	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objections	Total score
UBC retrofit downtown	1	1	0	-1	0	1	-1	0	1	4
Old town storm drains	1	1	0	0	1	-1	0	0	0	4
Critical facility back up generators	1	1	0	0	1	1	0	0	0	4
Weed abatement	1	1	1	1	1	0	1	1	0	7
Update flood maps	0	0	0	0	1	1	1	0	0	3
Reduce greenhouse gases	1	1	0	-1	1	0	0	0	0	3
Community Emergency Response Team CERT	1	1	1	1	0	0	1	1	0	6
Community Outreach Resiliency	1	1	1	1	1	1	1	1	1	9
Harden target from **terror**	1	1	0	0	0	0	0	0	0	2

6.5.1.2 Goal, Objective, and Mitigation Action Matrix

Based upon the risk assessment, the City's capabilities and public input, Table 6 -4 shows primary objectives and corresponding mitigation actions selected for further implementation and development during the next planning cycle. Table 6-4 provides details for each mitigation action with mitigation action descriptions, FEMA mitigation category, responsible party, and timeframe. Implementation Action Plans for each action number highlighted in Table 6-5 are shown in further detail in Section 7 (Implementation).

Table 6-4: Goal, Objective, and Mitigation Action Prioritization Matrix

Hazard	RF Factor	Action No.	Action Description	Primary Action
All Hazard	AH	AH-1	Robust community outreach team	y
All Hazard	AH	AH-2	CERT Training	y
Wildfire	WF	WF-1	Code enforcement enforcing the weed abatement program	y
Earthquake	EQ	EQ-1	Improve Community education programs	y
Flood	FL	FL-1	Update NFIP data and promote the program	
Dam Inundation	DI	DI-1	Have maps update to reflect changes from freeway construction	
Anti-terrorism	AT	AT-1	Identify and prioritize mitigation activities at critical facilities and gathering place that are vulnerable to terrorist attack	y
Climate Change	CC	CC-1	Continue networking with South Coast Air Quality Management District to meet greenhouse gas reduction targets	
Climate Change	CC	CC-2	Continue implementing the energy conservation and efficiency measures identified in the County of San Bernardino Greenhouse Gas Emission Reduction Plan and Community Climate Change Plan	
Santa Ana Winds	SW	SW-1	Require backup power at any new critical facility	y
Santa Ana Winds	SW	SW-2	Enforce dust control measures at construction sites during high wind events	y

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6.6 Mitigation Strategy

Table 6-5: Mitigation Action Table

Hazard	Mitigation Action	Description / Background	Mitigation Strategy Type	Funding	Responsible Agency	Time Frame	Status / Comments / Implementation Mechanisms
ALL Hazard	Increase readiness for all hazards in the City of Ontario.	Develop a robust community outreach team to promote emergency preparedness and hazard mitigation activities. Develop a volunteer cadre to include CERT (Community Emergency Response Teams), Ham Radio Operators and faith based organizations	ES	General Fund EMPG, HMPG, UASI.	Fire Department Emergency Management	1-3 YRS.	
Wildfire	Continue to reduce fire hazards in the City of Ontario.	Through Code Enforcement enforce the weed abatement program to reduce fuels available to burn	NRP, PPRO	General Fund Fees	Code Enforcement	On-Going	
Earthquake	Improve public education programs and practices to residents for earthquake risk.	Public education and outreach programs are an efficient and cost-effective way to promote meaningful changes within a community. A Program for Public Information (PPI) for earthquake awareness and mitigation could significantly reduce injury and property damage to earthquake. Use a suite of partnerships, activities, and products to educate the public about earthquake science and motivating homeowners to become prepared for earthquakes.	PE&A	General Fund Grants	Fire Department Emergency Management	On-Going	
Flood	Provide adequate flood protection to minimize hazards and structural damage.	National Flood Insurance Program. Participate in the National Flood Insurance Program (NFIP), which provides flood insurance within designated floodplains. Update NFIP data and maps with newly identified flood hazard areas in the County, as new information becomes available.	PRV	General Fund Fees	Public Works	On-Going	
Dam Inundation	Reduce damage from a breach in the San Antonio Dam.	Have Army Corps of Engineers review the inundation zones to reflect the retention basins, quarries, 2 subterranean freeways that now exist between the city and the dam Promote the National Flood Insurance Program	PRV	General Fund Fees, Grants	Public Works	1-5 Years	
Anti-Terrorism	Use antiterrorism strategies to discourage terrorism and protect the people, infrastructure and assets in Ontario from the effects of terrorism.	Use anti-terrorism design strategies to discourage / prevent acts of terrorism. Identify and prioritize mitigation activities (anti-terrorism force protection) at critical facilities and gathering places that are vulnerable to terrorist attacks.	PRV, PPRO	General Fund EMPG, HMPG, UASI.	Police	On-Going	
Climate Change	Reduce the impacts of climate change on the City and limit human activities that change the atmosphere's makeup.	Meet greenhouse gas (GHG) reductions targets set forth by the Clean Air Act and The City's Community Climate Change Plan and the General Plan Environmental Element Section ER Continue working with the South Coast Air Quality Management District to meet GHG reductions targets. Continue implementing the energy conservation and efficiency measures identified in the County of San Bernardino Greenhouse Gas Emissions Reduction Plan, and the City Community Climate Change Plan	PRV, NRP	General Fund, Grants, Fees	Utilities	On-Going	

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Section 7. Plan Maintenance

7.1 Monitoring, Evaluating and Updating the HMP

As a living document it is important that this plan becomes a tool in the Ontario's resources to ensure reductions in possible damage from a natural hazard event. This section discusses plan adoption, implementation, monitoring, evaluating, and updating the HMP. Plan implementation and maintenance procedures will ensure that the HMP remains relevant and continues to address the changing environment in the Ontario. This section describes the incorporation of the HMP into existing Ontario planning mechanisms, and how the Ontario staff will continue to engage the public.

7.1.1 Plan Adoption

To comply with DMA 2000, the city council has officially adopted the 2016 Ontario HMP. The adoption of the 2016 HMP recognizes the Ontario's commitment to reducing the impacts of natural hazards within the Ontario limits. A copy of the 2016 HMP adoption resolution is included in Section 1.

7.1.2 Implementation

Over time, Implementation Strategies will become more detailed and the Ontario's mitigation planners will work to provide more detail for priority mitigation actions. In conjunction with the progress report processes outlined in Section 6 implementation strategy worksheets provided in Section 7 will be extremely useful as a plan of record tool for updates. Each implementation strategy worksheet provides individual steps and resources need to complete each mitigation action. The following provides several options to consider when developing implementation strategies in the future:

- Use processes that already exist; initial strategy is to take advantage of tools and procedures identified in the capability assessment in Section 5. By using planning mechanisms already in use and familiar to Ontario's departments and organizations, it will give the planning implementation phase a strong initial boost, especially if a mitigation strategy calls for expanding existing programs, or creating new programs or processes at a later date. Section 6 provides more information on existing planning mechanisms.
- Updated work plans, policies, or procedures; hazard mitigation concepts and activities can help integrate the 2016 HMP into daily operations. These changes can include how major development projects and subdivision reviews are addressed in hazard prone areas or ensure that hazard mitigation concerns are considered in the approval of major capital improvement projects.
- Job descriptions; working with department or agency heads to revise job descriptions of government staff to include mitigation-related duties could further institutionalize hazard mitigation. This change would not necessarily result in great financial expenditures or programmatic changes.

7.1.3 Future Participation

The Ontario HMP Planning Committee, established for this update, will become a permanent advisory body to administer and coordinate the implementation and maintenance of the 2016 HMP. The Fire Department will lead the 2016 HMP plan development and updates and all associated HMP maintenance requirements. On an annual basis, the HMP Planning Committee will report to the city council and the public on the status of plan implementation and mitigation opportunities in Ontario. Other duties include reviewing and promoting mitigation opportunities, informing and soliciting input from the public and developing grant applications for hazard mitigation assistance.

7.1.4 Schedule

The HMP will be updated every five years, as required by DMA 2000. The formal update process will begin at least one year prior to the expiration of the 2018 HMP. However, should a significant disaster occur within the Ontario, the HMP Planning Committee will reconvene within 30 days of the disaster to review and update the HMP as appropriate. The city council will adopt written updates to the HMP as a DMA 2000 requirement.

7.1.5 Process

The Emergency Manager for the City of Ontario will be the lead person for the updates and progress of the 2018 HMP. The Emergency Manager will have an agenda item on a quarterly basis at the City Emergency Management Working Committee (EMWC) meetings to receive progress reports on the 2016 HMP projects. If there are any issues the EMWC can forward concerns to the City Manager.

7.2 Incorporation into Existing Planning Mechanisms

An important implementation mechanism is to incorporate the recommendation and underlying principles of the HMP into community planning and development such as capital improvement budgeting, building and zoning codes, general plans and regional plans. Mitigation is most successful when it is incorporated within the day-to-day functions and priorities of the jurisdiction attempting to implement risk reducing actions. The integration of a variety of Ontario's departments on the HMP Planning Committee provides an opportunity for constant and pervasive efforts to network, identify, and highlight mitigation activities and opportunities at all levels of government. This collaborative effort is also important to monitor funding opportunities which can be leveraged to implement the mitigation actions. HMP mitigation planners will actively incorporate information from any updates to the Ontario General Plan or the Community Climate Action Plan.

7.3 Continued Public Involvement

The City of Ontario will continually accept input and provide updates on the 2018 HMP by utilizing the following public outlets:

EMWC meetings, General Plan update meetings, community events, CERT training and refreshers, Alert Ontario, Nixle, Everbridge, Facebook, Twitter, City Web site, annual Shake-Out exercise, annual fire and police open house and events emergency preparedness is invited to like the Ontario Mills Preparedness Fair

Blank Mitigation Action Implementation Plan Worksheets.

Mitigation Action Implementation Plan	
Action x.x.x	
Implementing Agencies	
Lead Agency:	
Roles and Responsibilities:	
Support Agency :	.
Roles and Responsibilities:	
Preliminary Identified Tasks:	
1.	
2.	
3.	
Implementation Costs	
Estimated Capital Costs:	
Estimated Maintenance Costs:	
Implementation Resources	
Financial Resources (Funding):	
Technical Assistance Resources:	
Required Equipment, Vehicles, and Supplies	
Office Supplies	
Vehicles	
Implementation Timeframe	
Estimated Mitigation Action Start Date:	
Estimated Mitigation Action Completion Date:	

Blank Mitigation Action Reporting Forms

Progress Report Period:_____ to _____

(date) (date)

Project Title:_____ Project ID#_____

Responsible Agency:_____

Address:_____

City:_____

Contact Person:_____

Phone#: _____ Email address:_____

List Supporting Agencies and Contacts:_____

Total Project Cost:_____

Funding Source:_____

Anticipated Cost Overrun/Underrun:_____

Date of Project Approval:_____ Start date of the project:_____

Anticipated completion date: _____

Description of the Project (include a description of each phase, if applicable, and the time frame for completing each phase):_____

Milestones	Completed (✓)	Projected Date of Completion

MHMP Goal Addressed: _____

Indicator of Success:_____

Project Status:

□ *Project on schedule* □ *Cost unchanged*

□ *Project completed* □ *Cost overrun**

□ *Project delayed**

**explain _____*

□ *Project cancelled**

**explain _____*

Summary of progress on project for this report:

A. What was accomplished during this reporting period?

B. What successes have you encountered, if any?

C. What obstacles, problems, or delays have you encountered, if any?

D. How was each problem resolved?

E. Based on the past experiences (successes and obstacles), what changes, if any, need to be made to ensure completion?

Next Steps: *What are the next step(s) to be accomplished over the next reporting period?*

Other Comments:

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Section 8. Works Cited

- 2011 City of Ontario Hazard Mitigation Plan
- 2014 City of Ontario Community Climate Change Action Plan
- 2013 San Bernardino COUNTY REGIONAL GREENHOUSE GAS EMISSIONS INVENTORIES AND REDUCTION PLAN
- 2005 City of Ontario Hazard Mitigation Plan
- 2011 San Bernardino County Hazard Mitigation Plan
- 2010 State of California Hazard Mitigation Plan
- 2010 Ontario Plan (General Plan)
- DMA 2000 State & Local Plan Criteria: Mitigation Planning Workshop for Local Governments
- Getting Started: Building Support for Mitigation Planning (FEMA 386-1)
- Understanding Your Risks: Identifying Hazards And Estimating Losses (FEMA 386-2)
- Developing The Mitigation Plan: Identifying Mitigation Actions And Implementing Strategies (FEMA 386-3)
- Bringing the Plan to Life: Implementing the Hazard Mitigation Plan (FEMA 386-4)
- Using Benefit-Cost Review in Mitigation Planning (FEMA 386-5)
- Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning (FEMA 386-6)
- Integrating Manmade Hazards Into Mitigation Planning (FEMA 386-7)
- Multi-Jurisdictional Mitigation Planning (FEMA 386-8)
- Using the Hazard Mitigation Plan to Prepare Successful Mitigation Projects (FEMA 386-9)
- Planning for a Sustainable Future: The Link Between Hazard Mitigation and Livability (FEMA 364)
- Rebuilding for a More Sustainable Future: An Operational Framework (FEMA 365)
- FEMA 322 Public Assistance Guide
- HMP Update Guidance
- HMP Plan Review Tool
- HAZUS Local Database
- Stafford Act
- National Flood Insurance Act
- NOAA History of Significant Weather Events in Southern California
- City of Ontario Emergency Management Strategic Plan

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Appendix

Community Climate Action Plan

November 2014

City Council Approval December 16, 2014
Resolution No. 2012-122

CITY OF ONTARIO

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The Ontario Plan Final Environmental Impact Report

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SECTION 3 REVISIONS TO THE DRAFT EIR
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5.2 Agricultural Resources

Figure 5.2-1 Important Farmland
Figure 5.2-2 Williamson Act Contract Lands

5.3 Air Quality
5.4 Biological Resources

Figure 5.4-1 Areas of Potential Occurrence of Sensitive Species
Figure 5.4-2 Vegetation Associations and Land Cover

5.5 Cultural Resources

Figure 5.5-1 Historic Districts
Figure 5.5-2 Surveyed Archeological Resources

5.6 Global Climate Change (See Re-Circulated Draft EIR)
5.7 Geology and Soils

Figure 5.7-1 Geologic Map
Figure 5.7-2 Regional Faults
Figure 5.7-3 Areas of Liquefaction Susceptibility

5.8 Hazards and Hazardous Materials

Figure 5.8-1 Airport Land Use Compatibility
Figure 5.8-2 Historical Fires in Ontario

5.9 Hydrology and Water Quality

Figure 5.9-1 Chino Watershed
Figure 5.9-2 Flood Hazards Areas
Figure 5.9-3 Chino Groundwater Basin
Figure 5.9-4 Areas of Impaired Water Quality in the Chino Groundwater Basin

5.10 Land Use and Planning

Figure 5.10-1 Redevelopment Areas

5.11 Mineral Resources

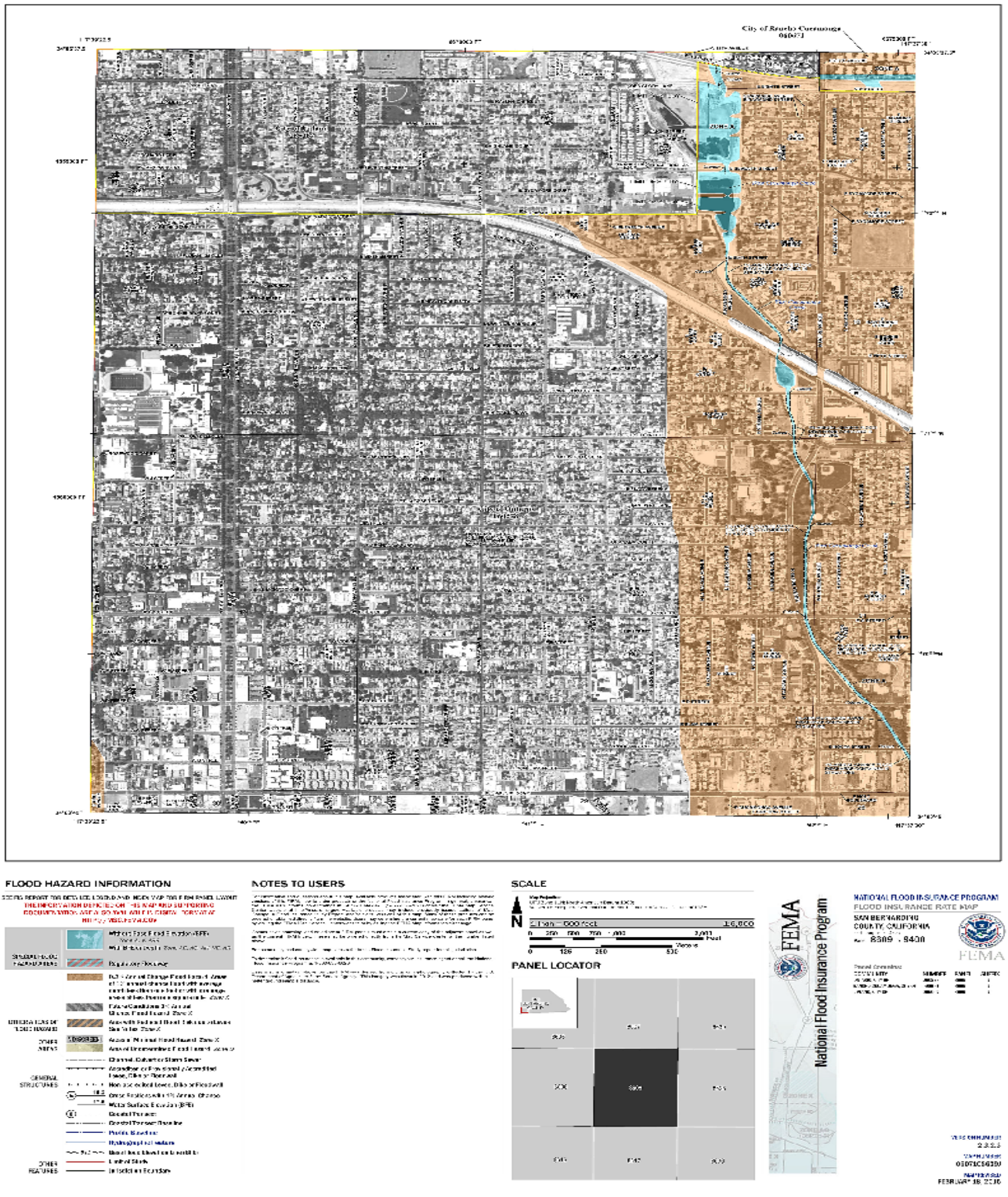
Figure 5.11-1 Mineral Resource Zones

5.12 Noise

Figure 5.12-1 Existing Noise Levels in Ontario from Surface Transportation

APPENDIX F ECI TECHNICAL BACKGROUND REPORT
APPENDIX G NOISE MODELING DATA

FEMA Flood Maps



FLOOD HAZARD INFORMATION

NOTES TO USERS

SCALE

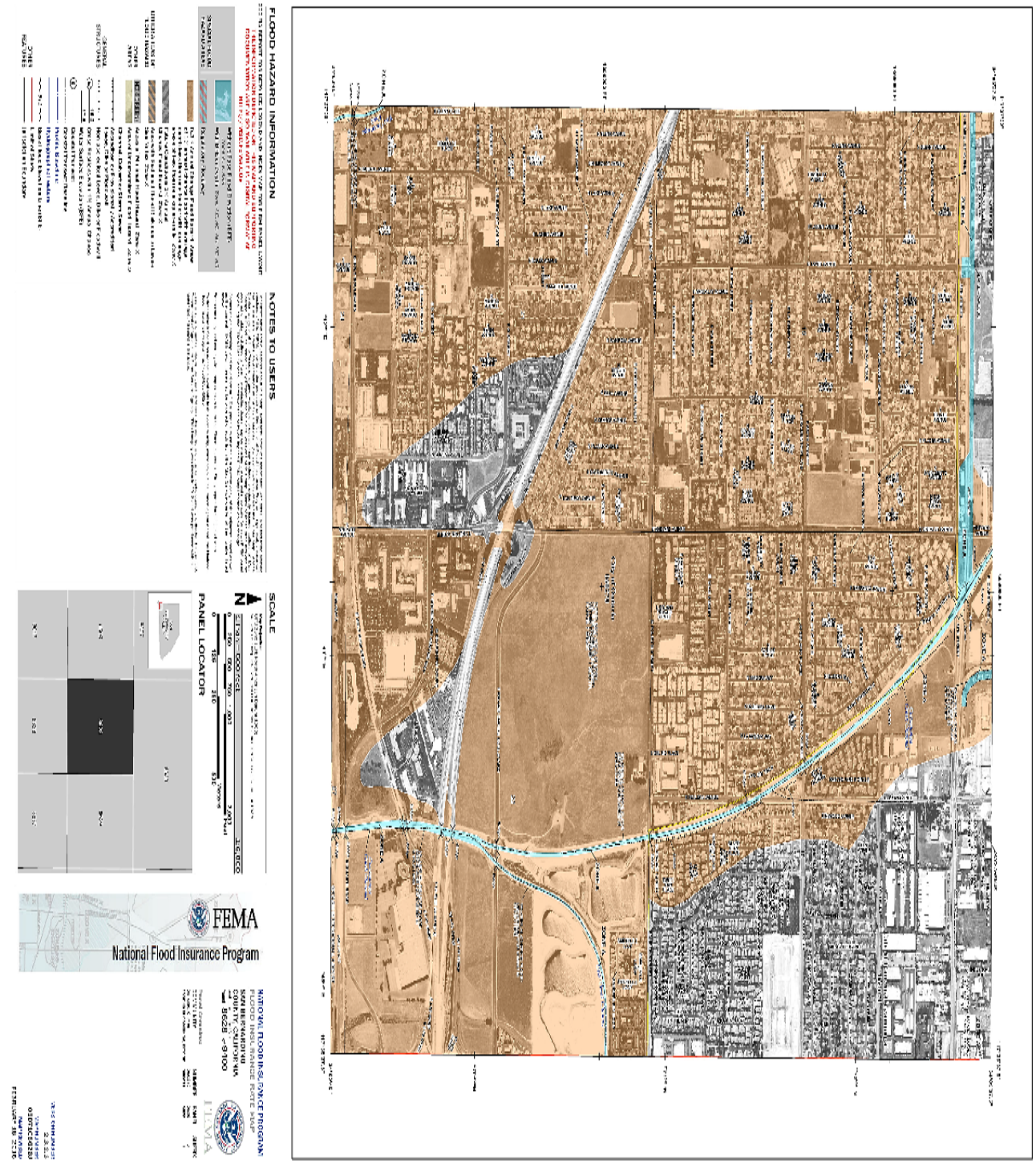
PANEL LOCATOR

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
SAN BERNARDINO COUNTY, CALIFORNIA
8309 - 9400

FEMA

National Flood Insurance Program

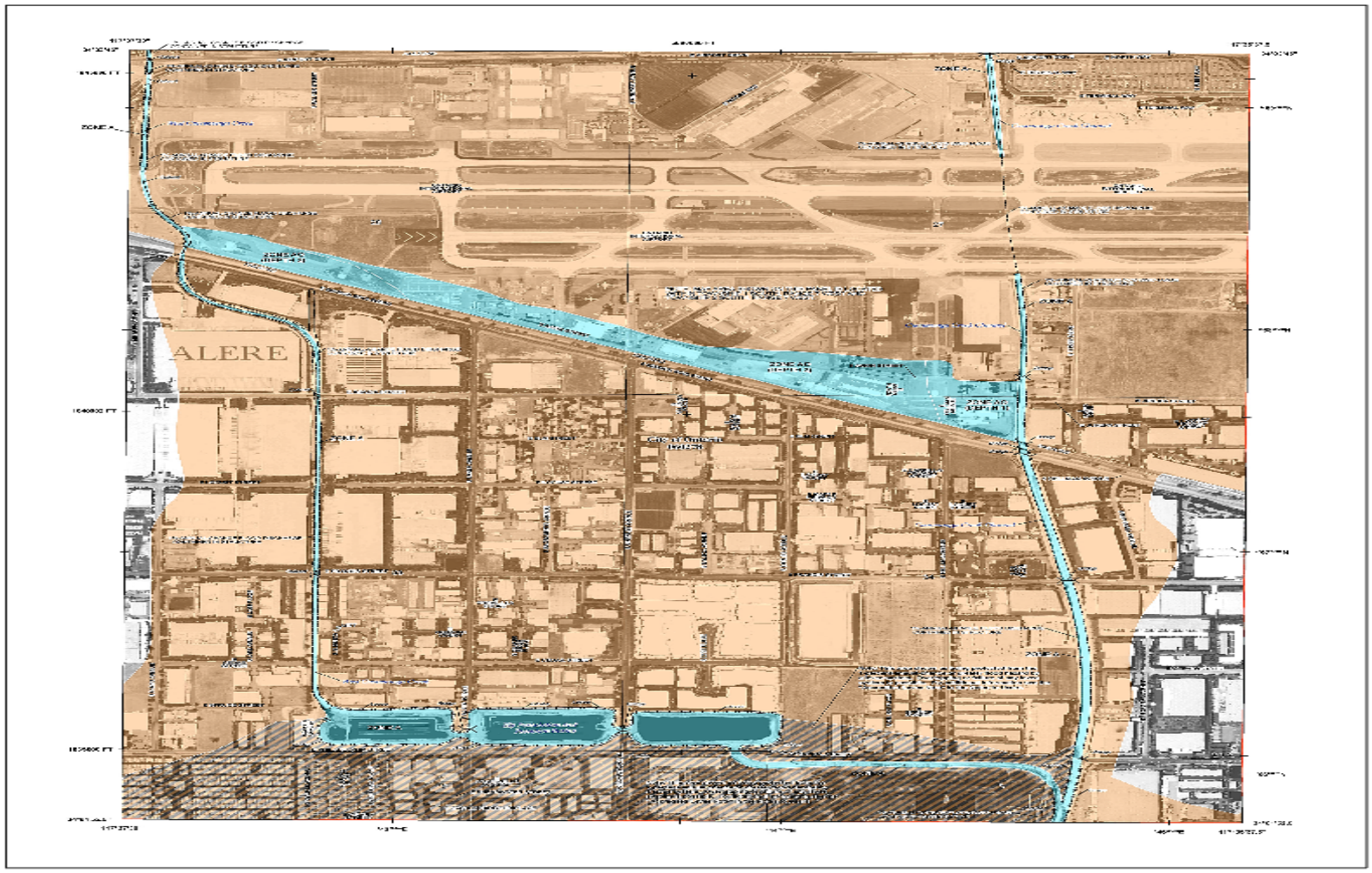
Map 4-13


FLOOD HAZARD INFORMATION
NOTES TO USERS
SCALE
PANEL LOCATOR
FEMA
National Flood Insurance Program

Map 4-14

FLOOD HAZARD INFORMATION
NOTES TO USERS
SCALE
PANEL LOCATOR
FEMA
National Flood Insurance Program

map 4-15



FLOOD HAZARD INFORMATION

NOTES TO USERS

SCALE

PANEL LOCATOR

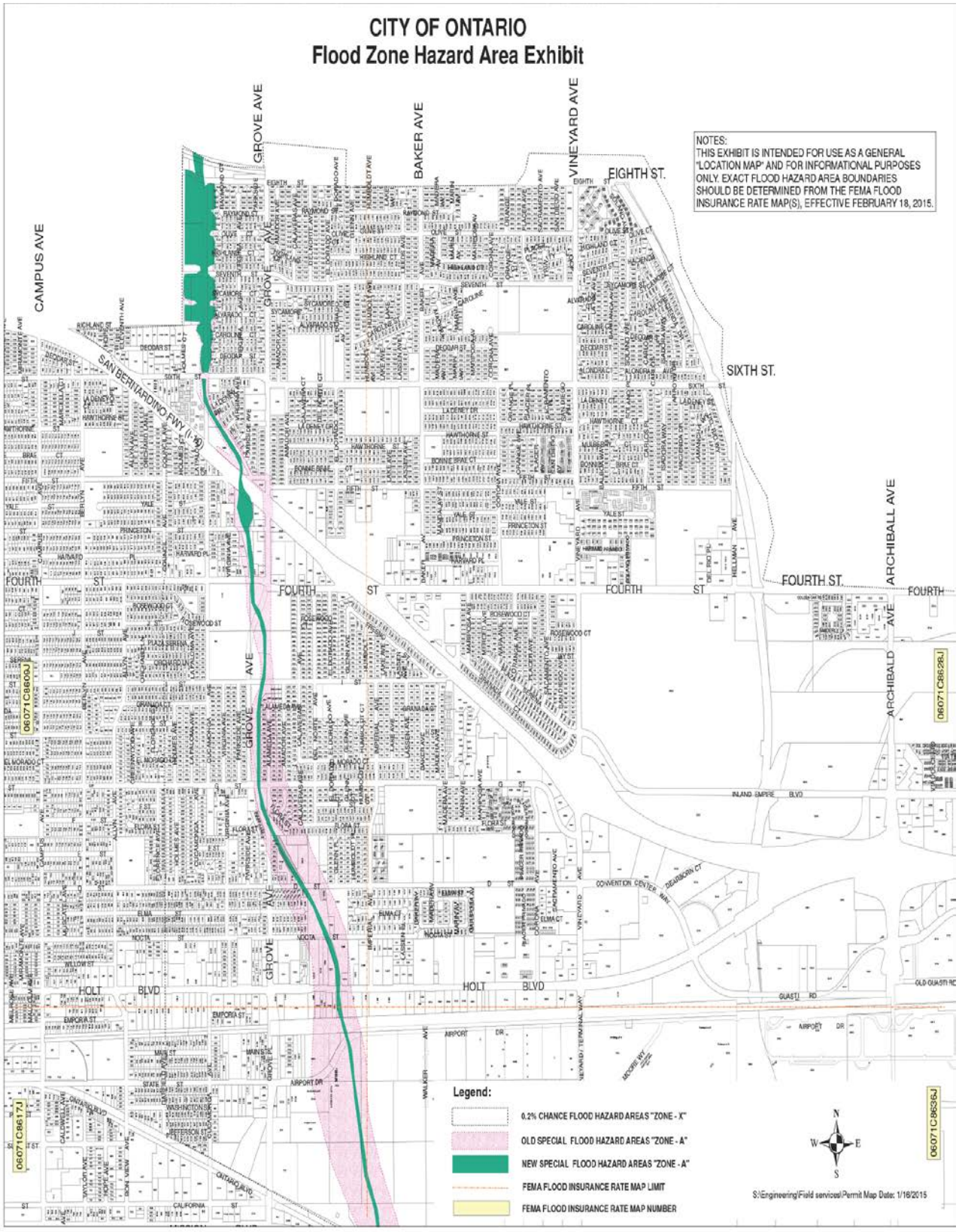
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP
SAN BERNARDINO
COUNTY, CALIFORNIA

FEMA

National Flood Insurance Program

FEBRUARY 18, 2015

Map 4-16


CITY OF ONTARIO
Flood Zone Hazard Area Exhibit
NOTES:
THIS EXHIBIT IS INTENDED FOR USE AS A GENERAL "LOCATION MAP" AND FOR INFORMATIONAL PURPOSES ONLY. EXACT FLOOD HAZARD AREA BOUNDARIES SHOULD BE DETERMINED FROM THE FEMA FLOOD INSURANCE RATE MAP(S), EFFECTIVE FEBRUARY 18, 2015.
CAMPUS AVE
GROVE AVE
BAKER AVE
VINEYARD AVE
EIGHTH ST.
SIXTH ST.
FOURTH ST.
ARCHIBALD AVE
SAN BERNARDINO FWY (I-10)
HOLT BLVD
INLAND EMPIRE BLVD
CONVENTION CENTER WAY
AIRPORT DR
GUASTI RD
OLD GUASTI RD
Legend:
0.2% CHANCE FLOOD HAZARD AREAS "ZONE - X"
OLD SPECIAL FLOOD HAZARD AREAS "ZONE - A"
NEW SPECIAL FLOOD HAZARD AREAS "ZONE - A"
FEMA FLOOD INSURANCE RATE MAP LIMIT
FEMA FLOOD INSURANCE RATE MAP NUMBER
N
W
E
S
S:\Engineering\Field services\Permit Map Date: 1/18/2015
06071C8606J
06071C8628J
06071C8617J
06071C8636J

Ontario Business & Industry Partners in Preparedness

March 8, 2017

Agenda

- Emergency Management in Ontario
- Ontario Hazard Mitigation Plan
- ReadyOntario
- Business Continuity Planning
- Roundtable

Emergency Management in Ontario

Ontario M.C. §§4-3.01 - 4-3.10

Disaster Council

Mayor and City Council

Emergency Management Working Committee

City Departments and Agencies

Director of Emergency Services

City Manager

Emergency Manager

Day-to-day Emergency Management responsibilities

Emergency Operations Center

- Full-time, "hot" facility
- Backup power generation
- Backup water supply – 7,000 gallon tank
- Size: 2,996 sq ft
- Maximum occupancy: 75
- Current configuration: Table seating for 48
- Audio-visual displays


What is a Hazard Mitigation Plan?
It's a road map government uses to reduce losses from disasters.


Hazard Mitigation Plan
Update 2016-17

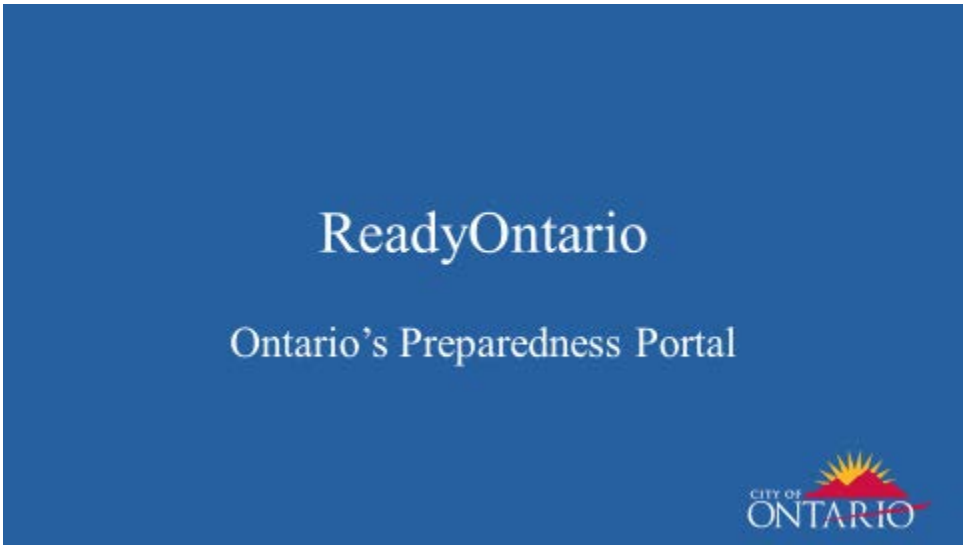

NATURAL
DISASTERS
HEALTH
LAHARS
GAMMA
RAY
WATER
DROUGHT
DISASTER
STORMS
WALL
AREAS
BLIZZARDS
TECTONIC
VIOLENT
HYPERNOVAE
LOST
HAZARDS
THUNDERSTORMS
EARTHQUAKE
HAZARD
FIRE
WAVES
MOVEMENT
VOLCANOES
PEOPLE
LANDSLIDES
TSUNAMIS


How does the government develop the plan?


The local government gathers input from
• Residents
• Government officials from all levels
• Businesses
• Schools
• Utilities
• Partners and stakeholders


Then gathers the data
• Prioritizes the risk
• Determines possible funding sources
• Formulates the plan
• Has the plan reviewed by local, state and federal officials
• Approves the plan by City Council action
• Implements projects as funding becomes available
• Yearly review of progress…..reprioritize as necessary
• Big review and update every 5 years


Questions?
Let's get input for the
Hazard Mitigation Plan!


ReadyOntario
Ontario's Preparedness Portal
CITY OF ONTARIO


CITY OF ONTARIO
SOUTHERN CALIFORNIA
Home
Contact Us
A | A | A
Search
RESIDENTS
BUSINESS
VISITORS
GOVERNMENT
JOBS


ReadyOntario
BETTER PREPARED TOGETHER


Return to
DEPARTMENTS
ReadyOntario
AlertOntario
ReadyOntario

San Bernardino County
Operational Area Coordinating Council (OACC)

Chino Valle Inde endent Fire District
Fire Training Center
5092 Schaefer Ave.
Chino, CA 91710

Thursday, August 4, 2016
0930 – 1530 Hours

Time	Agenda Item	Action Item
0930	**I. Welcome, Pledge of Allegiance, and Introductions**	
0935	**II. Program Overview and General Updates** *Michael Antonucci, Emergency Services Manager* *San Bernardino County Fire, Office of Emergency Services*	
	ACTION ITEM: Approval of the February 4, 2016, OACC meeting minutes and the August 4, 2016, meeting agenda	**2016-002**
0945	**III. Chino Valley Independent Fire District and Training Center Overview** *Tim Shackelford, Fire Chief* *Chino Valley Independent Fire District*	
1000	**IV. Waterman Terrorism Incident Panel Discussion** C` of San Bernardino Res onse/Incident Command Post - *Eric Fyvie, Emergency Operations Manager, City of San Bernardino Police Department* Human As ct – *Corwin Porter, Assistant Director, San Bernardino County Department of Public Health* Medical/Hos ital Res nse – *Scott Smith, Emergency Preparedness Coordinator, Arrowhead Regional Medical Center (ARMC)* Mutual Aid Process – *Donna Mayer, Region VI Disaster Medical Health Specialist, Riverside County Emergency Management Department* City Perspective - *Fay Glass, Emergency Operations Manager, City of Redlands* PIO Perspective - *Vicki Cervantes, Public Information Officer, City of San Bernardino* Victim's Services – *Andrew Gruchy, Deputy Director, San Bernardino County Department of Behavioral Health* Cost Recove – *Valerie Clay, Deputy Executive Officer, San Bernardino County Administrative Office* EOC and Post-Disaster Activities – *Mike Antonucci, Emergency Services Manager, San Bernardino County Fire, Office of Emergency Services*	

1230 **WORKING LUNCH**
Lunch generously provided by the Chino Valley Independent Fire District

1300 **V. Operational Area Grants Update***
Kathleen Gonzalez, Staff Analyst
San Bernardino County Fire, Office of Emergency Services

***For other reports, please refer to the August 2016 OES Quarterly Newsletter**

1305 **VI. Hazard Mitigation Plan Update**
Miles Wagner, Emergency Services Officer
San Bernardino County Fire, Office of Emergency Services

1310 **VII. Active Shooter Awareness Training**
Zack Mullennix, Emergency Services Officer/TLO
San Bernardino County Fire, Office of Emergency Services

1530 **VIII. Adjourn**

U comin OACC Meetin :

DATE: Thursday, November 3, 2016
LOCATION: San Bernardino County Department of Behavioral Health
Administration Building
303 E. Vanderbilt Way
San Bernardino, CA 92408

SAN BERNARDINO COUNTY

Plan

Project Management Team Meeting #050

OCTOBER 26, 2016 | 10:00 AM TO 12:00 PM — SBC GOV CTR | COMMUNITY ROOM

MEETING CALLED BY	PMT | Jerry Blum
MEETING PURPOSE	Safety Background Report
PLEASE READ BEFORE	
PLEASE PROVIDE BEFORE	–
PLEASE BRING	–
ATTACHED [ITEM REF#]	- Draft Safety Background Report (forthcoming --- not expected to read in advance)

ATTENDEES (^ not in attendance)

COUNTY PMT	ANCILLARY COUNTY STAFF	PLACEWORKS
Jerry Blum	Jeanette Hill	Colin Drukker
Suzanne Peterson	Chris Warrick	Brian Judd
Tom Hudson	Linda Mawby	Mark Hoffman
Terri Rahhal	David Wert	
Karen Watkins	*Note: Ancillary staff will be notified individually when their attendance is required.*	
Dena Smith		
Bob Page		
Gia Kim		
Aaron Dishno		

AGENDA OUTLINE

TIME	LEAD	ITEM

20 min PlaceWorks **1. Follow-up Action Item List**

- Land Use Districts
- SOI Agreements and WIB Employment Data
- Community Development Toolkit augment
- State GHG Transportation Sector Strategies
- Geodesign Summit
- Fiscal Interview Data Needs

90 min PlaceWorks **2. Draft Safety Background Report**

- Overview and discussion in advance of staff review of report
  - Seismic and Geologic Hazards
  - Flooding Hazards
  - Hazardous Materials
  - Fire Hazards
  - Emergency Preparedness

Balance Team **3. Conclusions, Assignments, and Next Steps**

San Bernardino County Fire
Office of Emergency Services

H P Review/Conference Call

1743 Miro Way
Rialto, CA 92376

Tuesday, July 19, 2016
3:00 p.m. – 4:00 p.m.

I. **Welcome**

II. **Participants**

III. **Website**

IV. **Resource Requests**
   A. County Assessor
   B. CA Energy Commission

V. **Invoice**

VI. **County Department of Public Works**

VII. **Questions/Closing Remarks**

San Bernardino County Fire Office of Emergency Services

2017 Hazard Mitigation Plan - 5th Stake Holders Meeting

Tuesday, March 28, 2017

18	IRWD									
19	Lowell	VD								
20	FAM	MICHAEL	MFam@dpw.sbcounty.gov	Public Works Engineering		SBCFCD	San Bernardino County FCD	909.387.7995	10 9 7 1020	MF
21										
22	V	C	ERIC.	AE	SBCFCD.COM	EMERGENCY		SCHOOLS	-	EV
23										
24										
25										
26										
27										
28										
29										
30										

San Bernardino County
Operational Area Coordinating Council (OACC)

Cit of Hes eria
Police Department
Community Room
15840 Smoketree
Hesperia, CA 92345

0930 – 1500 Hours

Time	Agenda Item	Action Item
0930	**I. Welcome, Pledge of Allegiance, and Introductions**	
0935	**II. Program Overview and General Updates** *Michael Antonucci, Emergency Services Manager* *San Bernardino County Fire, Office of Emergency Services*	
	ACTION ITEM: Approval of the November 5, 2015, OACC meeting minutes and the February 4, 2016, meeting agenda	2016-001
0945	**III. Hesperia Emergency Management Projects/Programs** *Brigit Bennington, Emergency Services Coordinator/CERT Coordinator* *City of Hesperia*	
1000	**IV. Governor's Office of Emergency Services (Cal OES) Report** *Doug Huls, Deputy Regional Administrator* *California Governor's Office of Emergency Services (Cal OES)*	
1010	**V. Year in Review: County OES in 2015** *Michael Antonucci, Emergency Services Manager* *San Bernardino County Fire, Office of Emergency Services*	
1030	**BREAK**	
1045	**VI. Hazard Mitigation Plan Process Review** *Miles Wagner, Emergency Services Officer* *San Bernardino County Fire, Office of Emergency Services*	
1055	**VII. Operational Area Grants Update*** *Kathleen Gonzalez, Staff Analyst* *Karen Page, Accounting Technician* *Kathryn Kehl, Staff Analyst* *San Bernardino County Fire, Office of Emergency Services*	

1115	**VIII. Round Table**
1130	**IX. Adjourn**
1200	**WORKING LUNCH** *Lunch generously provided by the City of Hesperia*
1200	**New Emergency Manager Orientation** *Cindy Serrano, Assistant Emergency Services Manager* *San Bernardino County Fire, Office of Emergency Services*

***For other reports, please refer to the February 2016 OES Quarterly Newsletter**

U comin OACC Meetin :

DATE: Thursday, May 5, 2016
LOCATION: TBD

San Bernardino County Fire
Office of Emergency Services

Local Hazard Mitigation Plan Committee

1743 Miro Way
Rialto, CA 92376

Tuesday, August, 30th, 2016
1:30 p.m. – 2:30 p.m.

AGENDA

Welcome and Introductions
Goals and objectives of this committee

I. HMP projects that are: completed, in progress ,suspended or in process
   - . What current projects
   - new projects since 2010
   - list of completed 2010 projects
   - proposed projects and
   - suspended projects

II. Worksheets and what needs to be done

III. Department updates, new names and staff and other changes since 2011

IV. Public notifications and concerns, and county agencies discussion

V. Next meeting or conference call

San Bernardino County Fire
Office of Emergency Services

CERT Symposium on Terrorism

Victoria Gardens Cultural Center
12505 Cultural Center Drive
Rancho Cucamonga, CA 91739

Saturday, September 24, 2016
8:00 a.m. – 4:00 p.m.

AGENDA

I. Check In **(07:30-08:00)**

II. Welcome/HMP Update Announcement**(8:00-8:10)**
Michael A. Ramirez, Emergency Services Officer, San Bernardino County Fire, Office of Emergency Services
Breanna Medina, Emergency Management Coordinator, Rancho Cucamonga Fire Protection District

III. Pledge of Allegiance and December 2, Memorial **(8:10-8:30)**

IV. Overview of the December 2nd, 2015, Mass Shooting Terrorist Event in San Bernardino **(8:30-9:30)**
Captain Raymond King, San Bernardino Police Department

V. Break **(9:30-9:40)**

VI. Counterterrorism Threat Awareness **(9:40-10:40)**
Claude Jubran, Joint Terrorism Task Force

VII. Break **(10:40-10:50)**

VIII. A Case Presentation on the Broken Banner Investigation **(10:50-11:50)**
Wade L. Lee, Special Agent, Federal Bureau of Investigation (FBI) Los Angeles/Riverside

IX. Lunch **(11:50-1:00)**

X. Active Shooter Awareness **(1:00-4:00)**
Rancho Cucamonga Police and Fire Protection District

*Special thanks to the City of Rancho Cucamonga for hosting

San Bernardino County Fire
Office of Emergency Services

Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) 2016-17 Update
Stakeholder Update Meeting # 5

In Person Meeting Only
1743 Miro Way
Rialto, CA 92376

Tuesday, March 28, 2017
10:00 a.m. – 11:30 a.m.

AGENDA

I. **Welcome and Introductions**
II. **Project Updates**
III. **Future Implementation (Section 7 Review)**
IV. **Plan Review and Submittal**
- Draft Plan Review / Checklists
- Public Involvement vs. Review
- Consultant Document Review
- Submitting your plan to FEMA

V. **Upcoming FEMA Hazard Mitigation Training**

San Bernardino County Fire
Office of Emergency Services

Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) 2016-17 Update
Stakeholder Update Meeting # 5

In Person Meeting Only
1743 Miro Way
Rialto, CA 92376

Tuesday, March 28, 2017
10:00 a.m. – 11:30 a.m.

AGENDA

I. **Welcome and Introductions**
II. **Project Updates**
III. **Future Implementation (Section 7 Review)**
IV. **Plan Review and Submittal**
- Draft Plan Review / Checklists
- Public Involvement vs. Review
- Consultant Document Review
- Submitting your plan to FEMA

V. **Upcoming FEMA Hazard Mitigation Training**

City of Ontario
Emergency Management Working Committee
Agenda

January 12, 2016 – 10:00-11:30 AM
Emergency Operations Center

[redacted]

II. Operational Communications

a. Satellite phones, GETS, WPS — Jimmy Chang

b. Public safety dispatching and radio use — Brian Acosta / Liz Morris

c. WebEOC and Everbridge — Ray Cheung

III. EOC Academy

a. Final roster

b. Schedule and flyer

IV. Equipment

a. Bon View warehouse inventory
   i. MREs
   ii. Backpack Kits

V. Roundtable

Next Meetin

Date/Time: February 16, 2017 – 10:00-11:30 AM
Location: EOC
Topic: AlertOntario / Everbridge

City of Ontario
Emergency Management Working Committee
Agenda

February 16, 2017 – 10:00-11:30 AM
Ovitt Family Community Library
215 E. C St, Ontario, CA 91764

I. Introductions

II. Everbridge

- a. City use — Ray Cheung
  - i. Ontario PD
  - ii. Ontario FD
- b. WorkDay integration — Anna Vaca
- c. AlertOntario — Ray Cheung
  - i. Marketing Plan — Media Team

III. Events – January 20-23 Storm

- a. Storm Damage — Roberto Perez
- b. Proclamation / Recovery process — Ray Cheung

IV. Training and Exercises — Ray Cheung

- a. EOC Academy update
- b. CERT training
- c. ShakeOut Exercise

V. Roundtable

Next Meetin

Date/Time:	March 9th, 2017 – 10:00-11:30 AM
Location:	EOC
Topic:	Walker Fire – Recreation and Comm. Services - "Expect the Unexpected"

City of Ontario
Emergency Management Working Committee
Agenda

April 13, 2017 – 10:00-11:30 AM
Ontario Police Department – Community Room
2500 S. Archibald Ave, Ontario, CA 91761

I. Introductions

II. Emergency Management Brief

III. Planning
- a. Satellite Phone Refresh
  - i. May 1-4
- b. Damage Assessment Workgroup
  - i. May 2, 2017, EOC Conf. Room, 2-3:30 PM

IV. Training and Exercises
- a. EOC Academy – Cohort 2 Scheduling
- b. Amgen TOC Exercise

V. Calendar
- a. EMWC Scheduling
- b. National Preparedness Month activities
  - i. City Hall / Library Preparedness Expo
  - ii. Fire Open House – October 7

VI. Roundtable

VII. OPD Tour — Bill Russell

Next Meetin

Date/Time:	May 25, 2017 – 10:00-11:30 AM
Location:	Ontario EOC
Topic:	After Action Conference

City of Ontario
Emergency Management Working Committee
Agenda

April 13, 2017 – 10:00-11:30 AM
Ontario Police Department – Community Room
2500 S. Archibald Ave, Ontario, CA 91761

I. Introductions

II. Emergency Management Brief

III. Planning
- a. Satellite Phone Refresh
  - i. May 1-4
- b. Damage Assessment Workgroup
  - i. May 2, 2017, EOC Conf. Room, 2-3:30 PM

IV Training and Exercises
- a. EOC Academy – Cohort 2 Scheduling
- b. Amgen TOC Exercise
  - i. Staffing

V. Calendar
- a. EMWC Scheduling
- b. National Preparedness Month activities
  - City Hall / Library Preparedness Expo
  - iii. - Fire Open House October 7

VI. Roundtable

VII. OPD Tour — Bill Russell

Next Meetin

Date/Time:	May 25, 2017 – 10:00-11:30 AM
Location:	Ontario EOC
Topic:	After Action Conference

EOC Academy Cohort 2 Schedule

June:	SEMS/NIMS Combined Information/Resource Management
July:	G-775 EOC Management and Ops
August:	G-191 ICS/EOC Interface Mobilization Drill
Sept:	G-611 Section/Position Training G-626E Essentials of EOC Action Planning
Oct 19:	*ShakeOut Full Scale Exercise*

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E Director	
EOC Safety	Dave Coote
EOC PIO	
O erations Chief	

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Planning Chief	
Situation Analysis Unit	Lorena Mejia
Documentation Unit	Marilyn Bonus
Lo istics Chief	Michael Johnson

e s	
omm nit	rian costa
IT Unit	Peter Witherow
Finance Chief	
Cost Recovery	Giancarlo Mezza
Cost Analysis	Lilyan Villarreal
Comp Claims	Kathy Garozzo

City of Ontario
Emergency Management Working Committee
Agenda

May 25, 2017 – 10:00-11:30 AM
Ontario Emergency Operations Center
415 E. B St, Ontario, CA 91764

I. Introductions

II. Emergency Management Brief

III. Planning

i. Hazard Mitigation Grant Program - NOI

ii. ARC Shelter Review

IV. Training and Exercises

a. Safety Assessment Program Training — Joe De Sousa

b. EOC Academy – Cohort 2

c. Ride-EX After Action

V. Roundtable

Next Meetin

Date/Time: July 20, 2017 – 10:00-11:30 AM
Location: TBD / Ontario EOC

City of Ontario
Emergency Management Working Committee
Agenda

July 20, 2017 – 10:00-11:30 AM
Ontario Emergency Operations Center
415 E. B St, Ontario, CA 91764

I. Introductions

III. Mitigation
   a. PDM and FMA grants

IV. Planning
   i. EM Strategic Plan
   ii. Emergency Operations Plan Revision

V. Training and Exercises
   a. WebEOC – Situation Dashboard
      i. August 8th, 2017 – 1-3 PM
      ii. September 27th, 2017 - 1-3 PM
      iii. October 3rd, 2017 – 1-3 PM

   b. ShakeOut – 10:19 am on October 19, 2017

VI. Events
   a. Route 66 – September 15-17, 2017
   b. Emergency Preparedness Expo – September 21, 2017

VII. Roundtable

Next Meeting

Date/Time:	August 16, 2017 – 10:00-11:30 AM
Location:	Ontario EOC
Topic:	Damage Assessment Annex

City of Ontario
Emergency Management Working Committee
Agenda

August 16, 2017 – 10:00-11:30 AM
Ontario Emergency Operations Center
415 E. B St, Ontario, CA 91764

I. Introductions

II. Emergency Management Brief

III. Planning
   i. Damage Assessment Annex Review

IV. Training and Exercises
   a. ShakeOut – 10:19 am on October 19, 2017
      i. Drill Manual Review
      ii. ExDesign Committee – September 5th, 1 PM
   b. Active Shooter Drill Discussion

V. Events
   a. Route 66 – September 15-17, 2017
   b. Emergency Preparedness Expo – September 21, 2017

VI. Roundtable

Next Meeting

Date/Time:	September 21, 2017 – 10 AM – 4 PM
Location:	Ovitt Family Community Library
Topic:	Emergency Preparedness Expo

City of Ontario
Emergency Management Working Committee
Agenda

October 25, 2017 – 10:00-11:30 AM
Public Works Conference Room
1425 S. Bon View Ave, Ontario, CA 91761

I. Introductions

II. Emergency Management Brief

III. Planning
   i. Winter Weather Workshop
   ii. GETS cards

IV. Training and Exercises
   a. ShakeOut AAR
   b. EOC Academy
   c. Statewide Medical Health and Training Exercise – November 9th

V. Events
   a. Emergency Preparedness Expo AAR

VI. Roundtable

Next Meetin

Date/Time: September 30, 2017 – 10 AM – 11:30 AM
Location: Ontario EOC

City of Ontario
Emergency Management Working Committee
Agenda

November 30, 2017 – 10:00-11:30 AM
Ontario EOC
415 E. B St., Ontario, CA 91764

II. Emergency Management Brief

III. Planning
- i. Employee recall policy
- ii. SCAG EQ initiative update
- iii. Functional Annexes
  1. Information Management Annex
     - a. Public Information Hotline
  2. Resource Management Annex
  3. Damage Assessment
     - a. Workshop

IV. Training and Exercises
- a. EOC Academy Schedule – Cohort 3
- b. Statewide Medical Health and Training Exercise – November 9th
- c. Everbridge Testing

V. Events
- a. Emergency Preparedness Expo Update

VI. Roundtable

Next Meeting

Date/Time: December 21, 2017 or January 18, 2018 – 10 AM – 11:30 AM
Location: Ontario EOC

City of Ontario
Emergency Management Working Committee
Agenda

December 21, 2017 – 10:00-11:30 AM
Ontario EOC
415 E. B St., Ontario, CA 91764

I. Introductions

II. Emergency Management Brief

III. Planning
   i. SCAG EQ Initiative

IV. Training and Exercises
   a. EOC Academy Schedule – Cohort 3
   b. Senior Leadership Academy
   c. Monthly Communications Testing Schedule
   d. 1st Qtr Exercise - February timeframe

V. Events
   a. High Wind / Nursery Fire Event

VI. Year End Review
   a. OEM Survey

VII. Awards

VIII. Roundtable

Next Meetin

Date/Time: January 18, 2018 – 10 AM – 11:30 AM
Location: Ontario EOC

City of Ontario
Emergency Management Working Committee
Minutes

January 12, 2017 – 10:00-11:30 AM
Emergency Operations Center

Sousa, David Coote, Charity Hernandez, Mike Pelletier, Anthony Coletta, Brian Acosta, Giancarlo Mezza, Reed Sigler, Pascal Pengestu, Anna Vaca, Nancy Morales, Shanita Simmons, Lilyan Villarreal, Don Meyer, Rudy Zeledon, Lorena Mejia. Kathy Garozzo, Jimmy Chang, and Raymond Cheung.

II. Operational Communications

a. Satellite phones, GETS, WPS – Jimmy Chang presented on emergency communication methods including satellite phones, Government Emergency Telecommunication Service (GETS), and Wireless Priority Service (WPS). Please see presentation for additional details. People who would like to request a GETS card or WPS added to their city phone, please send a department memo to Emergency Management with the request.

b. Public safety dispatching and radio use - Brian Acosta presented on how the city manages 911 call-taking, public safety dispatching, mutual aid response, and radio communications.

c. Amateur Radio, WebEOC, and Everbridge – Raymond Cheung presented on amateur radio capabilities, the WebEOC incident management software used for documentation and information sharing, and Everbridge incident notification system that is used for public notifications as well as for city responders.

III. EOC Academy

a. Final roster The final roster for the EOC Academy was reviewed. A total of 20 people will be in the first cohort. Additional room is available if anyone would still like to attend.
b. Schedule and flyer – The flyer with class schedule was reviewed. This flyer along with Outlook invites will be sent to all attendees.

IV Equipment
The inventory at the Bon View warehouse was recent conducted.

i. Heater Meals – Seven pallets of heater meals with a February expiration date were located. If anyone has contacts with non-profits who may be able to receive/utilize these meals, please contact Emergency Management.
ii. Backpack Kits – EM is conducting an inventory of current CERT backpack locations. Also, there are preparedness backpack kits available for department distribution. Please contact Emergency Management to request.

V. Roundtable

Dave Coote shared that the annual city paving work has been scheduled. Also, 200 dead or diseased trees on city property will be removed.

Lilyan Villarreal shared that Management Services will be conducting the city vehicle inventory.

Reed Sigler shared that HR Connect will be used as a city communication tool. Also, Miscellaneous employees will be receiving a 3% pay increase.

Shanita Simmons shared that they are developing new procedures based on new bidding laws that are going into effect.

Kathy Garozzo shared that Risk Management continues to process claims related to storm damage.

Nancy Morales shared that the Library will be upgrading their preparedness kits.

Charity Hernandez shared that the State of the City will be held on March 29th at the Ontario Convention Center.

Don Meyer shared that the recent storms have raised the reservoir levels at Lake Shasta to 120 feet above the level last year and snowpack is 130% of average. However, we are not out of the drought just yet.

Rudy Zeledon shared that 2017 will be a big year for development with 8,000 approved lots with much commercial, hotel, and industrial development.

Lorena Mejia shared that she is working on the Airport Master Plan.

Marilyn Bonus shared that Records is collecting all the claims from Risk Management.

Pam Martinez shared that Fire is conducting an AED inventory and will be rolling out Agency CPR training again.

Action Items

1. Review EOC Academy roster and send additional attendees to EM.
2. Send GETS/WPS request by department memo to EM.
3. Send potential contacts to distribute Heater Meals.
4. Locate CERT backpacks issued/deployed that are hanging on a wall for inventory.
5. Send request to EM if in need of red backpack preparedness kits.

Next Meetin

Date/Time:	February 16, 2017 – 10:00-11:30 AM
Location:	EOC
Topic:	AlertOntario / Everbridge

City of Ontario
Emergency Management Working Committee
Minutes

February 16, 2017 – 10:00-11:30 AM
Ovitt Family Community Library
215 E. C St, Ontario, CA 91764

I. Introductions were made. Attendees included: Pedro Rico, Marilyn Bonus, Joe DeSousa, David Coote, Nick Gonzalez, Tanya Spiegel, Mauricio Diaz, Antonio Alejos, Tony Coletta, Craig Grabow, Michael Johnson, Reed Sigler, Nancy Morales, Alan Saeger, Lilyan Villarreal, Loretha Nwosu, Don Meyer, Joe Minasso, Andy Marquez, Rudy Zeledon, Julie Dorey, Matt Hickey, Roberto Perez, John Hawkins, and Raymond Cheung.

II. Everbridge

a. Ray Cheung shared that both Ontario Police and Ontario Fire are using the Everbridge system for public and internal notifications via phone, email, and txt. The system was demoed to attendees. The system is available for use by any City department or agency – please contact Ray for more information.
b. Ray Cheung shared that IT and HR are progressing on integrating WorkDay with Everbridge. Reed Sigler assured the committee that confidential employee data will be protected through this process.
c. Nick Gonzalez displayed the graphics for the upcoming marketing plan for AlertOntario – the public facing side of Everbridge. Residents and businesses can sign up easily by texting ONTARIO to 888777 or going to www.Read ntario.com to register. Information about road closures, emergency evacuation orders, shelter in place orders, etc. will be disseminated through AlertOntario.

III. Events – January 20-23 Storm

a. Roberto Perez discussed the $140,937 in damage/costs after the January storm.
b. Ray Cheung presented on the typical disaster recovery / proclamation / recovery process and expectations for agency documentation.

IV. Training and Exercises

a. The EOC Academy is continuing with the two-day G775 EOC Management and Operations class coming up next. Attendees are asked to consider how the

Academy is fitting into their schedule and what the next cohort schedule should look like.

b. CERT training is scheduled for April 21-23, 2017. Employees are eligible to attend with supervisor approval. Registration is available on Eventbrite.com.
c. The 2017 ShakeOut Exercise will be held on October 19, 2017. The Committee was asked to begin thinking about how their agency can actively participate in tis year's exercise.

V. Roundtable

- Nick Gonzalez shared that the State of the City is coming up on March 29.
- John Schmidt shared the he is working on the City Hazard Mitigation Plan and may be contacting staff regarding the update.
- Julie Dorey encouraged the Committee to utilize practical exercises for training.
- Lilyan Villarreal shared that she is working on ensuring emergency purchases on credit cards are available and working properly.
- Loretha Nwosu shared that the Museum is updating their emergency kits.
- Craig Grabow shared that Marina Jimenez is starting at Fleet.
- Joe DeSousa shared that the biannual weed abatement campaign is starting with 900-1,000 letters being sent out.
- Dave Coote shared that Parks and Maintenance is hard and work preparing for the upcoming storm and 9 pallets of sandbags are available for deployment.

Next Meetin

Date/Time: March 9th, 2017 – 10:00-11:30 AM
Location: De Anza Community and Teen Center
Topic: Walker Fire – Recreation and Comm. Services - "Expect the Unexpected"

City of Ontario
Emergency Management Working Committee
Minutes

March 9, 2017 – 10:00-11:30 AM
De Anza Community and Teen Center
1405 S. Fern Ave, Ontario, CA 91762

I. Introductions were made.
Pedro Rico, Joe De Sousa, David Coote, Mauricio Diaz, Antonio Alejos, Peter Witherow, Pascal Pangestu, Nancy Morales, Michelle Sifuentes, Don Meyer, Joe Minasso, Rudy Zeledon, Julie Dorey, Pat Birkett, John Schmidt, and Raymond Cheung were in attendance.

II. Emergency Management Brief
Ray Cheung briefed the group on some of the projects Emergency Management has been working on, including:

- Two Partners in Preparedness workshops were held for Faith-Based organizations as well as for Business and Industry in March.
- Five of the six expired pallets of Heater Meals were donated to local charity.
- A ReadyOntario tent and table covers have been purchased for public education events.
- Over 500 people have signed up for AlertOntario via the website or by text message.
- There are spots left for the April CERT class (note: class has since filled up).
- CERT-trained volunteers are being interviewed to form an active team.
- The G191 EOC and ICS Interface class will be held on March 23rd.
- A question was asked about emergency food and water supplies. At this time, departments are responsible for procuring their own supplies for essential staff with a recommended 3-day supply. MREs may be purchased from http://meyerscustomsupply.com/ by the pallet or individual packs of 12.

III. Presentation - Expect the Unexpected
Julie Dorey gave a presentation on the Walker Fire in 2007 and how Recreation and Community Services supported a shelter for both the public and first responders.

IV. Hazard Mitigation Plan Review

John Schmidt reviewed the Ontario Hazard Mitigation Plan. The committee was asked to review the update and send comments to rschmidt ontarioca. ov by April 13th.

V. Training and Exercises

a. Ray Cheung asked the committee for potential Lunch 'n' Learn topics for city employees to attend on a monthly basis. Topics may include: what it means to be a Disaster Service Worker, modules from CERT training including how to shut-off utilities, CPR/AED training, and the phases of a disaster.
b. The Exercise Design Committee will be meeting on March 21 at 3 pm at the EOC to begin planning for the May 18th EOC exercise.
c. The San Bernardino Operational Area is offering Disaster Cost Recovery training. These are classes that will assist the City in ensuring maximum disaster reimbursement and anyone involved in Finance/Admin, Logistics, or Documentation should try to take one of these if they can. Register at htt s://disastercostrecove series.eventbrite.com.
    i. April 11-12 – Disaster Cost Recovery
    ii. April 13 – Purchasing Compliance with Federal Regulations
    iii. April 27 – D umentation Plan and Work Process Flow

VI. Roundtable

- Don Meyer, OMUC, shared that they are working on the budget and going through water rate studies.
- Joe Minasso, OMUC, shared that they are working on routing solid waste services to the developments at Ontario Ranch.
- Joe De Sousa, Code, shared that an illegal medical marijuana facility was given a vacate warrant.
- Mauricio Diaz, Engineering, shared that the Traffic Management Center is coming along and will be complete in 2-3 months.
- John Schmidt, Emergency Management, shared that Simpler Life in Redlands is an excellent source of preparedness items.
- Julie Dorey, Recreation, shared that they are gearing up for a busy summer season and they have several vacancies they are looking to fill.
- Michelle Sifuentes, Museum, shared that they are putting the finishing touches on their new grounds and will have an open call for the Ontario Open Art Exhibition.
- Nancy Morales, Library, shared that they are busy getting ready for summer and updating their emergency manual.

- Dave Coote, Parks and Maintenance, shared that James R. Bryant Park is being renovated with lighting and cameras, the paving schedule is underway, and dead trees are being cleared from Calaveras and Del Norte.
- Lt. Pat Birkett, Police Dept-Airport Bureau, shared they continue to transition from LAWA to the Ontario International Airport Authority.
- Richard Avila, Planning, shared that there is a lot of incoming development for both new lots and in-fill development.
- Peter Witherow, IT, shared that they have been working with the airport transition as well.

VII. Community Center Tour
Recreation staff gave the committee a tour of the De Anza Community and Teen Center

Next Meetin

Date/Time: April 13, 2017 – 10:00-11:30 AM
Location: Ontario Police Dept Community Center

City of Ontario
Emergency Management Working Committee
Minutes

April 13, 2017 – 10:00-11:30 AM
Ontario Police Department – Community Room
2500 S. Archibald Ave, Ontario, CA 91761

I. Introductions were made. The following were in attendance: Pedro Rico, Anthony Vega, David Coote, Charity Hernandez, Mauricio Diaz, Tony Coletta, Reed Sigler, Peter Witherow, Pascal Pangestu, Nina Kaivan-Mehr, Nancy Morales, Lilyan Villarreal, Don Meyer, Joe Minasso, Andy Marquez, Bill Russell, Kathy Garozzo, Jammee Digon, Michael Krouse, Daniel Adamus, John Schmidt, and Raymond Cheung.

rschmidt ontarioca. ov as soon as possible.

III. Planning
   a. Satellite Phone Refresh – New sim cards have been purchased for existing satellite phones with local phone numbers. Emails will be sent out to users to bring in their sat phones to get their sim card exchanged during the week of May 1-4.
   b. Damage Assessment Workgroup – This workgroup will establish Rapid Damage Assessment, Safety Assessment, Initial Damage Estimate, Preliminary Damage Assessment policy/procedures which will become the Damage Assessment Annex to the Emergency Operations Plan.
      May 2, 2017, City Hall – Community Rooms 1 and 2, 2-3:30 PM

IV. Training and Exercises
   a. EOC Academy – Cohort 2 Scheduling – Please send names of those interested/able to attend Cohort 2 to Raymond by April 28th. A class schedule will then be established with those attending.
   b. Amgen TOC Exercise – The final exercise will take place on May 18th from 9 AM – 3 PM. Please see staffing roster below and confirm attendance to Raymond.

V. Calendar

a. EMWC Scheduling – The Emergency Management Work Committee will move to the 3rd Thursday of the month at the same scheduled time of 10-11:30 AM.
b. National Preparedness Month activities
    i. City Hall / Library Preparedness Fair – The tentative date for the Preparedness Fair is September 21st from 9 AM – 2 PM. City departments are invited to participate with a booth sharing information that may be useful and pertinent to disaster preparedness. David Coote and Joe Minasso volunteered to be on the planning committee for this event.
    ii. Fire Open House – Another opportunity for public outreach is on October 7th at the annual Fire Dept Open House.

VI. Roundtable

- Pedro Rico shared that Building is working on citizens' access and adding the ability to schedule inspections online.
- Charity Hernandez shared the State of the City was successful and that Economic Development staff will be attending the ICSC is May to promote the City.
- Michael Krouse shared that the Convention and Visitors Bureau will also be sending staff to ICSC. He mentioned the concert bookings are going well at the Arena with the Marvel stage show coming to town. The Convention Center and Arena will be receiving vehicle charging stations. A California Welcome Center will be established at the Airport. The Town Square concert series will also be starting soon.
- John Schmidt shared that he continues work on the Hazard Mitigation Plan as well as prepping for the upcoming CERT class.
- Bill Russell shared the police department is recruiting for new officers and continues to work on staffing for the Airport.
- Tony Coletta shared that the Fire Department is also working on the integration plan to staff the Airport and is hiring to meet those needs. The Department is working on a remodel for Fire Station 2 and a bid for a new Fire Station in Ontario Ranch.
- Anthony Vega shared that weed abatement program is underway with approximately 900 properties in the city.
- Joe Minasso shared that Solid Waste is also hiring additional staff. They are also expanding the food waste program.
- Nancy Morales shared the Library is working on the budget and is reviewing its AED program.
- Don Meyer shared that although the drought is officially over, some of the water restrictions will be permanent including not water 48 hours after measureable rainfall.

- Daniel Adamus shared that airport recently completed its FAA Certification Inspection with a Tabletop on April 12. They are reviewing assets and agreements with the American Red Cross and other agencies to pre-deploy material and resources at the airport.
- Pascal Pengestu shared that IT is expanding fiber services to the Mills, Convention Center, and Arena.
- Dave Coote shared that Parks and Maintenance are installing additional lighting at James R. Bryant Park. Staff were just recertified with chainsaw training.
- Kathy Garozzo shared that insurance filings have been picking up at the Airport and they are working physicals for the many new City employees.
- Mauricio Diaz shared that the Transportation Management Center is continuing to be built out with communications to the signals across the City.
- Reed Sigler shared that HR is supporting the many new hires across City Departments and adding new HR analysts as well. He encourages all employees to ensure their emergency contact information is up to date on WorkDay. HR will be negotiating Misc. employee contracts. HR Connect will soon feature promotional opportunities, new hires, and newly promoted employees.

VII. OPD Tour - Bill Russell graciously gave a tour of OPD headquarters to interested committee members.

Next Meetin

Date/Time: May 25, 2017 – 10:00-11:30 AM
Location: Ontario EOC
Topic: After Action Conference

EOC Academy Cohort 2 Schedule

June: SEMS/NIMS Combined
Information/Resource Management

City of Ontario
Emergency Management Working Committee
Agenda

May 25, 2017 – 10:00-11:30 AM
Ontario Emergency Operations Center
415 E. B St, Ontario, CA 91764

I. Introductions were made. Joe De Sousa, David Coote, Brian Acosta, Reed Sigler, Peter Witherow, Nancy Morales, Lilyan Villarreal, Michelle Sifuentes, Andy Marquez, Bill Russell, Anita Argueta, Kathy Garozzo, Kristen Sten, Mike Machuca, Michael Krouse, Tina Marie Jimenez, Lucia Garcia, Terri Douglas, Eric Richardson, and Raymond Cheung were in attendance.

II. Emergency Management Brief – Raymond Cheung briefed the group on upcoming public outreach events that Emergency Management and CERT volunteers will be attending. He also shared that there are now five Emergency Management volunteers who will be helping out with various duties.

III. Planning

i. Hazard Mitigation Grant Program – Raymond shared that FEMA and CalOES are allowing applications for projects to be funded by the Hazard Mitigation Grant Program (HMGP). The Notice of Interest for potential projects are due by June 15. A city grant-writer is available to assist with the application. Contact Raymond as soon as possible if your department has a project that may qualify for funding (see PowerPoint).

ii. ARC Shelter Review – Eric Richardson from the American Red Cross discussed that the ARC is updating their shelter database and is looking to reduce the number of shelters listed to make it more manageable. He advised that cities should maintain approximately 6-10 potential shelter locations of varying sizes. Size requirements dictate 20 sqft per person for an evacuation site and 40 sqft for an overnight shelter site. Ontario will be updating the database with refreshed contact info that will be evergreen for city facilities. The Convention Center and Arena expressed interest in being involved as the city builds out the Care and Shelter Annex in the future.

IV. Training and Exercises

a. Safety Assessment Program Training - Joe De Sousa discussed the Safety Assessment Program (SAP) training he is coordinating. The SAP program certifies building inspectors and engineers to "red-tag" damaged structures. The training is also good for staff who may encounter any damaged buildings to have some knowledge about their safety. The anticipated training is being targeted for July 10-11 and July 12-13 to give an opportunity for staff to rotate into the training. If departments are interested in having staff attend, please contact Joe by June 8th.

b. EOC Academy – Cohort 2 – Raymond discussed the upcoming second Cohort of the EOC Academy. The schedule was changed to allow for half-day trainings per survey results. The culminating exercise will be the Shakeout Exercise on October 19. To be added to the roster, please email names to Raymond by June 2nd.

c. Ride-EX After Action – Raymond led the group discussion on the EOC exercise last week. Various improvements were discussed which will be integrated into the After Action Report for the exercise. Exercise participants who have not sent into their feedback, please send it to Raymond by June 15th.

V. Roundtable-

Michael Krouse, Ontario Convention Center, shared that after the Manchester Arena attack, SMG has been reviewing security protocols and perimeter controls. Both the Convention Center and Arena will be conducting additional emergency exercises in collaboration with city staff in order to be more prepared for similar situations.

Reed Sigler, Human Resources, shared that they continue to support the public safety transition at the Airport with an additional 27 firefighters and 8 police officers coming on staff.

Michelle Sifuentes, Museum, shared that the Ontario Open exhibit is closing and the "Beyond Words" exhibit will be opening in July. The "Great Adventure" program will also be starting soon for children.

Peter Witherow, IT, shared that they wrapping up several big projects and are continuing to support the Airport transition.

Kathy Garozzo, Risk Management, shared that they are processing daily liability claims as usual.

Bill Russell, OPD, shared that OPD headquarters is starting their renovation which will take place over the next few weeks and months.

Dave Coote, Parks and Maintenance, shared that 50+ trees at Homer F. Briggs Park have been identified as dead or diseased and will need to be removed.

Lilyan Villareal, Management Services, shared that they have been updating their policies including for OPD, Code, and EOC. A credit card for the EOC with a $1,500 limit has been ordered and a secure location identified.

Brian Acosta, Fire, shared that both OPD and OFD are hiring entry-level dispatchers and the recruitment is currently open.

Joe De Sousa, Code Enforcement, shared that they are wrapping up their weed abatement season, however, there are lots near the Convention Center that have not been touched due to the presence of burrowin owls

Next Meeting

Date/Time:	July 20, 2017 – 10:00-11:30 AM
Location:	Ontario EOC
Topic:	EM Strategic Plan / Ontario Emergency Operations Plan

City of Ontario
Emergency Management Working Committee
Minutes

July 20, 2017 – 10:00-11:30 AM
Ontario Emergency Operations Center
415 E. B St, Ontario, CA 91764

I. Introductions were made. In attendance were: Charity Hernandez, Economic Development; Mauricio Diaz, Engineering; Pascal Pengestu, IT; Nancy Morales, Library; Michelle Sifuentes, Museum; Don Meyer, OMUC; Joe Minasso, OMUC; Melissa Ramirez, OPD; Craig Frame, Chino Valley USD; Mike Machuca, CBB Arena; Tina Marie Jimenez, Ontario Convention Center; John Ayres, Ontario Convention Center; Jennifer Shaw, Southern California Edison; John Schmidt, OFD; Raymond Cheung, OFD.

II. Emergency Management Brief – Raymond Cheung briefed the Committee on the progress of the EOC Academy Cohort-2 and the events that the Emergency Management volunteers are attending or are scheduled to attend, including National Night Out on August 1st. The power outage on July 14th was also discussed where 1,000+ customers and multiple city facilities lost power. The Revenue building's generator backup power did work – Municipal Services is investigating the problem. Jennifer Shaw from SCE explained that the failure was due to the "A-banks" being locked out.

III. Mitigation
   a. PDM and FMA grants – FEMA's Pre-Disaster-Mitigation and Flood Mitigation Act grants are currently available. The Notice of Interest (NOI) is due on August 4th. Currently, no agencies or departments have expressed interest in applying.

IV. Planning
   i. The 5-year EM Strategic Plan was reviewed. Final comments should be sent to Raymond Cheung. Approval will be made during the August EMWC.
   ii. The Emergency Operations Plan revision was reviewed by the Committee. Final comments should be sent to Raymond Cheung. Approval will be made during the August EMWC.

V. Training and Exercises

a. WebEOC – A new board has been developed called the Situation Dashboard. This board will be used to track the status of all city departments, school districts, and partner agencies/utilities throughout the city after an emergency. This is a new training and all EMWC Department Emergency Coordinators should take this training and be familiar with the Situation Dashboard (except for Cohort 2 attendees who have taken this class).

   The following training dates are being offered at the EOC. If you would like to schedule a training for multiple people at your site, please contact Raymond Cheung (RSVPs also go to Raymond).

   i. August 8th, 2017 – 1-3 PM
   ii. September 27th, 2017 - 1-3 PM
   iii. October 3rd, 2017 – 1-3 PM

b. ShakeOut – This year's ShakeOut drill will occur at 10:19 am on October 19, 2017. The Committee discussed last year's drill and what they would like to see this year. The Committee recommended the following:
   i. Use of the PA system to announce the drill in city buildings where it is available.
   ii. Evacuation and accountability drill of City Hall.
   iii. Evacuation and accountability drill for Public Works.
   iv. Use of the WebEOC Situation Dashboard.
   v. Damage Assessment field response.

VI. Events

a. Route 66 – This year's Route 66 event is scheduled for September 15-17, 2017. The EOC will be activated at a Level-3 (lowest level) to support the event, particularly for OPD. Don Meyer, Joe Minasso, and Andy Marquez indicated that they would be available to participate in the activation for training purposes. If others would like to take part, please contact Raymond Cheung.
b. Emergency Preparedness Expo – This first annual expo will take place September 21, 2017 from 10 am – 4 pm between the Library and the Ontario Senior Center. The primary audience will be City employees and Library/Senior Center patrons. Confirmed booths include ReadyOntario/CERT, Fire Prevention, Seismic Simulator, the Mobile Command Post, Southern California Edison, Solid Waste/Utility, and the Library. The Committee suggested to advertise the event in the HR Connect email and to combine it with a city fundraiser.

VII. Roundtable

- Don Meyer, OMUC, shared that a new meter reading system is being developed where readings will be transmitted and available in near real-time.
- Joe Minasso, Solid Waste, shared that they are working on routing operations to Ontario Ranch where development is growing rapidly. The commercial food waste program is also moving forward.
- Charity Hernandez, Econ. Development, shared that they are working on land development and video shorts for city businesses.
- Michelle Sifuentes, Museum, shared that the Beyond Words exhibit is winding down. The Photorealism exhibit is next up. The Museum will also be conducting emergency training in August.
- John Schmidt, OFD, shared that he has been working on the EOP.
- Nancy Morales, Library, shared that the summer reading program will be wrapping up soon and that KinderGo will be starting.
- Mauricio Diaz, Engineering, shared they are working on two signal projects

- Tina Marie Jimenez, Ontario Convention Center, shared that they are also increasing security measures with tent entries for bag check as well.
- Pascal Pengestu, IT, shared that they are supporting OFD's move into the fire station at the airport. Windows 10 and Office 365 are also on the slate for city-wide deployment.
- Craig Frame, Chino Valley USD, shared that the district is implementing a new security system using key fobs and adding more security cameras.
- Melissa Ramirez, OPD, shared that the remodel is going well and event planning for National Night Out is continuing.

Next Meetin

Date/Time:	August 16, 2017 – 10:00-11:30 AM (***off schedule meeting***)
Location:	Ontario EOC
Topic:	Damage Assessment Annex

City of Ontario
Emergency Management Working Committee
Minutes

August 16, 2017 – 10:00-11:30 AM
Ontario Emergency Operations Center
415 E. B St, Ontario, CA 91764

I. Introductions were made. The following attendees were present: Pedro Rico, Building; Joe DeSousa, Code Enforcement; David Coote, Parks/Maintenance; Tanya Spiegel, Economic Development; Tony Coletta, Fire; Mike Johnson, Municipal Services; Reed Sigler, HR; Peter Witherow, IT; Nina Kaivan-Mehr, IT; Nancy Morales, Library; Michelle Sifuentes, Museum; Don Meyer, OMUC; Joe Minasso, OMUC; Andy Marques, OMUC; Melissa Ramirez, OPD; Kristine Scott, SoCalGas; Raymond Cheung, Fire.

II. Emergency Management Brief – Emergency Manager Raymond Cheung briefed the Committee on the CERT Advanced Training held on August 16th, the upcoming CERT Basic Course on October 27-29, the Collaborative Organizations Active in Disaster (COAD) hosted by the City, and the Partners in Preparedness presentations being offered.

III. Planning
   i. The Damage Assessment Annex was reviewed by the Committee. This annex will be used primarily following a large earthquake and many departments will need to work together to achieve a good assessment of damage city-wide. Please review and send comments back by September 29th.

IV. Training and Exercises
   a. ShakeOut – 10:19 am on October 19, 2017 – The EOC will activate for a Functional Exercise for ShakeOut day. Cohort 2 will be filling EOC positions, but OEM will be reaching out to fill additional positions for the exercise.
      i. Drill Manual Review – The committee reviewed the drill manual that will be made available to all departments to use for their ShakeOut participation. The ShakeOut flyer should also be posted prior to the drill.
      ii. The ExDesign Committee will be reconvening to design the disaster that will befall the EOC during the ShakeOut exercise. Don Meyer, Joe Minasso, David Coote, and Andy Marquez volunteered to sit on the committee.

b. Active Shooter Drills were discussed. San Bernardino County was awarded a grant that will conduct train-the-trainer sessions and provide drill equipment.

V. Events

a. Planning for the Route 66 event continues. OPD will be utilizing the EOC during the event from Sept 15-17. EOC staff may conduct a training activation on Saturday, Sept 16.
b. The inaugural Emergency Preparedness Expo will take place on Sept 21 from 10 am – 4 pm. There will be a dozen city depts., organizations, or vendors participating including the Seismic Simulator from the County. All employees are encouraged to come and learn more about how to become more prepared.

VI. Roundtable

Tony Coletta, Fire, reminded all that September was National Preparedness Month and how it was important to ensure your families are prepared so that you can rest easy and be able to focus on the critical tasks at hand.

Mike Johnson, Municipal Services, shared that they have had several new recruitments including for supervisors and mechanics. They are also assisting with the PD dispatch renovation and replacing the sump pump in City Hall Annex.

Don Meyer, Utilities, shared that they are also filling 7-8 openings from entry-level on up.

Joe Minasso, Solid Waste, shared they are hiring as well, including drivers due to the growth in the Ontario Ranch area.

Pedro Rico, Building, shared that they are busy with the new development and are fully staffed.

Peter Witherow, IT, shared that they continue to be involved in the Airport transition.

Nancy Morales, Library, shared that they have a new montage with vintage pictures of the Model Colony. There is the ability to print out the pictures and add captions to them.

Joe DeSousa, Code Enforcement, shared that they hired four new officers and are conducting operations regarding illegal dumping.

David Coote, Parks and Maintenance, shared that the book drop at the Library was moved to be in a safer location. He also conducted a safety/wellness training in relation to conflict resolution.

Tanya Spiegel, Economic Development, shared that Econ. Dev. has been busy with new development and projects across the city.

Reed Sigler, HR, shared that they are in hiring mode and will now be supporting the Airport with HR services.

Kristin Scott, SoCalGas, shared that they are replacing valves at Etiwanda and 4th which will allow the ability to shut-off valves automatically in an emergency.

Michelle Sifuentes, Museum, shared they their photorealism exhibit is opening and they will be conducting emergency training for staff.

Melissa Ramirez, OPD, shared they have been hiring sworn and professional staff and are fully taking over law enforcement services at the Airport.

Next Meetin s

Date/Time:	September 21, 2017 – 10 AM – 4 PM
Location:	Ovitt Family Community Library
Topic:	Emergency Preparedness Expo

Date/Time:	October 26, 2017 – 10 AM – 11:30 AM
Location:	Ontario EOC
Topic:	ShakeOut After-Action and Winter Weather

City of Ontario
Emergency Management Working Committee
Minutes

October 25, 2017 – 10:00-11:30 AM
Public Works Conference Room
1425 S. Bon View Ave, Ontario, CA 91761

I. Introductions were made. In attendance: Pedro Rico, Building; Joe De Sousa, Code Enforcement; Mike Pelletier, OFD; Anthony Coletta, OFD; Brian Acosta, OFD; Raymond Cheung, OFD; Robert Schmidt, OFD; David Bertola, OFD; Bill Russell, OPD; Nancy Morales, Library; Don Meyer, OMUC; Julie Dorey, Recreation.

II. Emergency Management Brief. Emergency Manager Raymond Cheung briefed on the following items.

- The 2nd CERT class of the year will be held on October 27-29. It is a fully registered class and will be at the Ontario Fire Training Center.
- The City has been participating in the Southern California Association of Government Earthquake Cohort which has the Inland Empire cities working together to increase resiliency to earthquakes in the region. Pedro Rico and Don Meyer volunteered to participate in the Cohort as building and water infrastructure issues are prevalent.
- Emergency Management now has the ability to directly order Government Emergency Telecommunication Service (GETS) cards which prioritize landline network service during an emergency. Please contact Emergency Management if you feel your Department needs GETS cards.
- The International Association of Emergency Manager's conference is taking place in Long Beach from November 12-15. Contact Emergency Management if you are interested in attending.
- A Faith Communities Partners in Preparedness Workshop is being organized for November 29. Julie Dorey recommended utilizing the *promotores* to spread the word about the workshop.

III. Planning

i. Winter Weather Workshop. Don Meyer briefed the Committee on the National Weather Service predictions for the upcoming winter. Thus far, the modeling has been highly variable with the latest prediction being that there are equal chances for either above or below average precipitation for this rain season.

IV Training and Exercises

a. ShakeOut AAR – The ShakeOut exercise on October 19th was discussed. Many City departments participated in the Drop, Cover, Hold On drill and the Senior Center conducted an evacuation drill of the facility as well. Next year's exercise may include a component with an Everbridge notification to all City employees as test of the system.
b. EOC Academy – The 2nd Cohort of the EOC Academy graduated 16 individuals. Cohort 3 will start up again in January and run through April to allow for more people with end of fiscal year duties to participate. It will remain on a half-day schedule as participants seem to prefer that option.
c. Statewide Medical Health and Training Exercise – November 16th – The City will be participating in a Chempack exercise along with County Public Health and County Office of Emergency Services. This will test the request and deployment of a Chempack nerve agent antidote to an incident location in Ontario.

V. Events

a. Emergency Preparedness Expo AAR – The Expo that took place on September 21st was discussed. Just over 500 people visited the Expo during opening hours. The Committee recommended to hold it with an already existing event to maximize promotional efforts. Combining it with a Concert in the Park was one of the options presented and will be investigated further.

VI. Roundtable

- Tony Coletta noted that next year's ShakeOut will take place on October 18th at 10:18 AM.
- Julie Dorey shared that her staff would like to see more functional learning opportunities including more drills.
- Pedro Rico announced Building had 12 plan-checkers attend Safety Assessment Program training with CalBO. Another training will be held in February in Anaheim. The new Development Director, Hassan Haghani, is very aggressive about revitalizing the downtown area.
- Joe De Sousa announced that he is a new grandfather.
- Bill Russell shared that construction at OPD should be complete by Thanksgiving. The COPS Division received a grant to enforce alcohol beverage sales to minors. A new street racing enforcement program has also rolled out recently.
- Don Meyer shared that Utilities will be conducting tabletop exercises for field staff.

- John Schmidt shared that he has been reaching out to counterparts in Santa Rosa for lessons learned related to the recent fires and sheltering operations.

Next Meeting

Date/Time: November 30, 2017 – 10 AM – 11:30 AM
Location: Ontario EOC

City of Ontario
Emergency Management Working Committee
Agenda

November 30, 2017 – 10:00-11:30 AM
Ontario EOC
415 E. B St., Ontario, CA 91764

I. Introductions were made. In attendance were: Pedro Rico, Building; Anthony Vega, Code Enforcement; David Coote, Community & Public Services; Charity Hernandez, Economic Development; Tanya Spiegel, Economic Development; Tony Colleta, OFD; Brian Acosta, OFD; John Schmidt, OFD; Pam Martinez, OFD; Sylvia Rodriguez, HR; Peter Witherow, IT; Pascal Pengestu, IT; Nancy Morales, Library; Don Meyer, OMUC; Joe Minasso, OMUC.

II. Emergency Management Brief – Raymond briefed on the following topics:

- A Faith Communities Partners in Preparedness Workshop was held on November 29 with 8 attendees. The next meeting will be on February 14 and recur on a quarterly basis.
- Raymond was a Controller/Evaluator at a City of Los Angeles Functional Exercise and complimented the Ontario EOC team on how well perform compared to a much larger city.
- Tony and Raymond attended the International Association of Emergency Manager's conference in Long Beach.
- Southern California Edison held a workshop recently with a couple of key takeaways. An outage map will be emailed if an outage covering 150+ customers is expected to last over 90 minutes. The Estimated Restoration Time on the outage webpage is calculated by a computer and may not be accurate in the first hour.
- SoCalGas also held a workshop with fire and PD reps and emphasized the close partnership between the utility and first responders.
- The Emergency Management Performance Grant is expected to receive final approval within the next week or so.
- Intermedix will release an update for WebEOC to version 8.4 in December. It will be evaluated and if no significant bugs are anticipated, the city server will be upgraded next quarter.
- A hotwash was held with instructors from the October CERT class. One of the changes will be to not schedule the class during the World Series. Additionally, the City CERT program was discussed. Contingent on instructor

availability, City CERT refresher modules will be held as a test ground for further expansion of the program.

III. Planning

i. Employee recall policy - The new employee orientation discusses the need for City employees to respond to the nearest city if they are not able to respond to their work location. The possibility of a City policy to codify this expectation was also discussed.

ii. SCAG EQ Initiative – Three potential project ideas were discussed including: seismic retrofitting of historic buildings in the downtown area, an inventory of URM and soft-story structures, and the installation of seismic valves at two City water reservoirs. Due to several factors, it is likely that the seismic valves will be the most feasible/achievable. Charity Hernandez and Pedro Rico will be coordinating the update of the current URM database.

iii. Functional Annex development was discussed and committee members volunteered to participate in one or more of the annexes.

1. Information Management Annex – Joe Minasso, Tony Coletta, Don Meyer, Nancy Morales.
2. Resource Management Annex – Brian Acosta, Tony Coletta, Charity Hernandez.
3. Damage Assessment Annex – Raymond is reviewing additional data input options for ArcGIS. Following finalization, a seminar and drills/exercises will be held to continue annex familiarization.

IV. Training and Exercises

a. EOC Academy Schedule – Cohort 3 Draft Schedule was disseminated to be reviewed by Committee by December 15 for any city-wide scheduling conflicts. The Task Book was also reviewed for responders who will be submitting for their EOC position credential. Sylvia Rodriguez advised people to enter their CSTI certificates into WorkDay for tracking.

b. Statewide Medical Health and Training Exercise held on November 9 was discussed. This was a communications drill between the field, EOC, and the Operational Area EOC. After action improvements include more radio training, more training on the WebEOC OA server, and communication options with Kaiser Ontario.

c. Everbridge – The Everbridge contract renewal is up at the end of December. A request is in progress to upgrade the account to include additional functionality in order to ease the ability of Police and Fire Dispatch to utilize the system. The system is available to all departments to use for internal notifications as well – if anyone is interested, please contact Emergency Management. Also, the

Conference Bridge functionality will begin to be tested on a quarterly basis beginning in January.

V. Events

a. Emergency Preparedness Expo Update – The current strategy to increase successful participation is to combine forces with the last scheduled date of the Summer Concerts at Townsquare. A ReadyOntario booth will be setup in each of the preceding concerts to advertise the Expo. Additionally, the Expo will be used to highlight the National Preparedness Month Campaign which will include several events including a disaster scavenger hunt and escape room.

VI. Roundtable was skipped due to time.

ACTION ITEMS:

- Review Draft EOC Academy Cohort 3 schedule and return comments by December 15.

Next Meetin

Date/Time: December 21, 2017 - 10 AM – 11:30 AM
Location: Ontario EOC

City of Ontario
Emergency Management Working Committee
Minutes

December 21, 2017 – 10:00-11:30 AM
Ontario EOC
415 E. B St., Ontario, CA 91764

I. Introductions were made. In attendance were Pedro Rico, Building; Joe De Sousa, Code; David Coote, Parks & Maintenance; Mike Pelletier, Fire; Anthony Coletta, Fire; John Schmidt, Fire; Brian Acosta, Fire; Raymond Cheung, Fire; Pascal Pengestu, IT; Nancy Morales, Library; Michelle Sifuentes, Museum; Joe Minasso, Solid Waste; Imee Perius, Chino Valley USD;

II. Emergency Management Brief – Raymond briefed on the following topics:

- The State/County has still not yet given final approval for the FY17 Emergency Management Performance Grant allocations.
- Raymond attended the first week of the FEMA Advanced Academy last week and it has been a very good in-depth training so far covering a wide-variety of topics including leadership principles, communication/collaboration facilitation, and case studies
- The CERT End of Year Volunteer Appreciation meeting was held on December 19 and was very well attended.

III. Planning

i. SCAG EQ Initiative – The final project submitted was the seismic valves for the city reservoirs. Next steps include acquiring cost estimates and researching grant/funding opportunities.

IV. Training and Exercises

a. EOC Academy Schedule – Cohort 3 – The final schedule was discussed which had some minor changes including G-606 going online (decreasing required classroom time) and minor schedule adjustments. Department Coordinators should recruit and submit attendee names to Raymond by January 13.
b. Senior Leadership Academy – OEM is developing a half-day Senior Leadership Academy for senior leaders who do not have the scheduling flexibility to go through the regular EOC Academy. Those who qualify for the Senior Leadership Academy will be Department Heads or Directors responsible for filling a Policy Group role or will be directing staff to the EOC. This class will be certificated, but will not satisfy the state credentialing standard. The Committee recommended

that a memo from city management also be developed to establish this direction.

c. The Monthly Communications Testing Schedule for 2018 was discussed. The monthly test will occur on the 3rd Wednesday of the month (one day before scheduled EMWC) and disseminated via Everbridge at 9 am by Fire Communications.
   - Everbridge Polling will occur in January, April, July, October
   - Everbridge Conference Calling will occur in February, May, August, November
   - WebEOC Activity Log will occur in March, June, September, December

d. 1st Quarter EOC Exercise – An EOC Functional Exercise will be scheduled for the 1st quarter with a tentative February date to be determined. The Exercise Design Committee will meet on January 10 at 10 am to begin exercise development.

V. Events

a. High Wind / Nursery Fire Event- Deputy Chief Mike Pelletier discussed this event which began around noon on December 5. Fire crews responded to a mulch fire with size of approximately 50 x 100 yards. A city-owned excavator and two water tenders were used during the response. Heavy smoke from the area affected residents along Clover Rd which necessitated multiple Everbridge, Nixle, and Twitter notifications. Everbridge was also used to staff off-duty firefighters on reserve engines. Four dogs were rescued during the incident. The police helicopter downlink was also used to acquire imagery.

VI. Year End Review – Raymond went through a list of the many accomplishments by the Committee this year and is looking forward to an even better 2018.

a. OEM Survey – Raymond shared that a Surveymonkey link (https://www.surveymonkey.com/r/CLF7V33) will be sent out asking for feedback on the quality of Emergency Management services this year.

VII. Awards – Members of the Exercise Design Committee and Damage Assessment Committee were awarded Certificates of Appreciation for their work.

VIII. Roundtable

- Nancy Morales shared that the Library received a $30k grant to develop a Makers' Space which will have 3D printers, sewing machines, and other related equipment for the public to use.
- Joe Minasso shared that Solid Waste conducted their quarterly community cleanup with 350 cars attending the event. With an additional 1,000 new residents recently, additional staff are being hired.

- Charity Hernandez reported that Economic Development is focusing on business retention and attraction. The State of the City sponsorship packages are being sent out. Several incoming high-profile projects are also in the works.
- Pedro Rico shared that he is continuing to work on the list of unreinforced masonry buildings in the city. Many of the buildings no longer exist and many are also considered historical buildings. The Building Dept. is also hiring two college interns for the first time.
- Tony Coletta shared that the new City Manager is interested in the work we are doing and the Committee should expect to see the City Manager attending future trainings and exercises.
- Pascal Pengestu reported that IT is working connecting city facilities to the fiber network in the New Year which will bring faster and more reliable service.
- Michelle Sifuentes shared that the Museum has been very busy with the "Darkness to Light" exhibit closing soon and the "Diversity and Inclusion" exhibit opening soon thereafter. New docent training will be happening in 2018.
- David Coote reported the he, Mark Chase, Roberto Perez, and Raymond Cheung met to discuss the creation of a Parks and Maintenance Department Operations Center and the utilization of WebEOC for DOC response and documentation.
- Brian Acosta shared the LAWA dispatchers from the Airport have moved into Fire Dispatch and will be cross-training Fire Dispatchers in airport operations dispatching as part of the OIA transition.
- Imee Perius reported that she is filling in for Craig Frame as the rep from Chino Valley USD.

ACTION ITEMS

1. Send EOC Academy attendees to Raymond by January 13.

2. Complete OEM Year-End Survey at htt s: www.surve monke .com r CLF7V33.

Next Meetin

Date/Time: January 18, 2018 – 10 AM – 11:30 AM
Location: Ontario EOC

City of Ontario
Emergency Management Working Committee
Agenda

October 13, 2016 – 10:00-11:30 AM
Emergency Operations Center

II. EMWC Mission Statement
   a. Goals and Objectives, Future Topics
   b. Meeting Dates and Time

III. Department Emergency Coordinator (DEC) Overview
   a. DEC Roles & Responsibilities
   b. DEC Roster
   c. EOC Organization and Activation Rosters

IV. Local Hazard Mitigation Plan (LHMP)
   a. Timeline
   b. Hazard Identification and Risk Assessment
   c. Mitigation Projects

V. Exercises
   a. ShakeOut – October 20 at 10:20 AM

VI. Training and Credentialing
   a. EOC - ICS/SEMS/NIMS, G775, G191, Section/Position
   b. WebEOC

VII. Technology
   a. WebEOC Demo
   b. Everbridge Demo

VIII. Roundtable

Next Meeting

Date/Time:	November 10, 2016 – 10:00-11:30 AM
Location:	EOC
Topics:	LHMP Projects

City of Ontario
Emergency Management Working Committee
Agenda

November 10, 2016 – 10:00-11:30 AM
Emergency Operations Center

II.	EMWC Mission Statement a. Goals and Objectives	
III.	Local Hazard Mitigation Plan (LHMP) a. Critical Facilities b. Mitigation Projects	
IV.	Events a. State St. Fire i. Tabletop	Deputy Chief Pelletier
V.	Winter Weather Overview	Don Meyer
VI.	Training a. NIMS certificate uploading in Workday	Reed Sigler
VII.	Exercises a. ShakeOut – After Action	
VIII.	EOC / Technology a. Meeting Locations b. Everbridge - AlertOntario	
IX.	Roundtable	

Next Meetin

Date/Time:	December 8, 2016 – 10:00-11:30 AM
Location:	TBD
Topic:	2017 Training and Exercise Calendar

City of Ontario
Emergency Management Working Committee
Agenda

December 8, 2016 – 10:00-11:30 AM
Emergency Operations Center

II. Local Hazard Mitigation Plan (LHMP)
   a. Hazard Identification Review

III. Planning
   a. EOC Organization
   b. Position Rosters

IV. Events
   a. Santa Ana Wind Event
      i. Cost/damage tracking discussion

V. Training & Exercises
   a. Training and Exercise Workshop

VI. Roundtable

Next Meeting

~~Date/Time:~~	January 12, 2017 – 10:00-11:30 AM
Location:	EOC
Topic:	Operational Communications

City of Ontario
Emergency Management Working Committee
Minutes

October 13, 2016 – 10:00-11:30 AM
Emergency Operations Center

Fierro, Vicki Kasad, Dave Bucholtz, David Coote, Robin Lucero, Andy Narquez, Scott Murphy, Lorena Mejia, Bill Russell, Liz Morris, Delilah Patterson, Anita Argueta, Kathy Garozzo, Nina Kai-van Mehr, Anna Vaca, Nancy Morales, Shanita Simmons, Janny Phan, Michelle Sifuentes, Don Meyer, Joe Minasso, Tanya Spiegel, Mauricio Diaz, Jaime Maciel-Carrerra, Antonio Alejos, Mike Pelletier, Tony Coletta, Brian Acosta, Giancarlo Mezza, Craig Grabow, Reed Sigler, Pascal Pangestu, Raymond Cheung

II. The draft EMWC Mission Statement was announced: "The Emergency Management Working Committee works as a cohesive team to prevent, mitigate, prepare for, respond to, and recover from any disaster in order to save lives, property, and the environment from harm in the City of Ontario and beyond." A phrase including continuity of operations may be added as well.
   a. The goals and objectives of the EMWC for 2017 will need to be drafted. Each member is to submit one SMART objective they would like the committee to tackle.
   b. The committee decided to keep the meetings on the second Thursday of the month starting at 10 AM. Departments who wish to host meetings in the future are invited to do so.

III. Department Emergency Coordinator (DEC) Overview
   a. The roles and responsibilities of the DEC were discussed. Each rep is the primary department contact point, contributes to city-wide planning, and coordinates department planning and preparedness.
   b. DECs were asked to confirm the accuracy of the roster and add their mobile phone numbers to the sheet and to Workday. HR offered to fill-in the employee ID area of the roster which will be used for Everbridge and WebEOC accounts.
   c. The committee discussed the EOC activation roster for Management and General Staff. Agencies were assigned to each position and will be filling out the roster.

IV. Local Hazard Mitigation Plan (LHMP)
   a. The LHMP is tentatively scheduled to be submitted to FEMA by March 2017. The EMWC will be responsible for the Hazard Identification and Risk Assessment,

Mitigation Strategy and Projects, Vulnerability Assessment, and overall review of the plan. City Clerk / Records will be investigating if the plan has been adopted into the Safety Element of the General Plan per AB 2140. If not, Planning will be assisting in this effort. AB 2140 compliance provides the opportunity for increased disaster reimbursement.

b. The committee worked together on the Hazard Identification and Risk Assessment for the city and graded various hazards on probability, extent, geographic area, and overall significance. This will be the first in "ranking" the hazards facing the city.
c. Next month, the committee will look at updating the mitigation projects in the current plan and add additional ones if needed.

V. Exercises

a. The ShakeOut exercise is going to be held on October 20 at 10:20 AM. It will consist of a drop, cover, hold-on drill, a stand-up meeting to go over emergency procedures, non-structural mitigation assessment, and satellite phone test. An emergency kit contest will be held at the EOC at 11 AM. Flyers and a drill manual were discussed.

VI. Training and Credentialing

a. EOC responders are required to be credentialed for the positions they hold. The training that will be required include: ICS/SEMS/NIMS, G775, G191, Section/Position, and EOC Action Planning training. The committee discussed the best schedule to hold these in-person, multi-day classes and the consensus so far was to hold them one day a week for one month.
b. WebEOC training will only last 1-2 hours and can be held on Wednesday afternoons.

VII. The WebEOC and Everbridge demos were postponed to next month due to available time.

VIII. Roundtable – Departments shared the various initiatives and projects they are working on. The Library has a Dia de los Muertos event coming up. Parks recently opened the Schimmel Dog Park. HR reminded the committee about open enrollment and shared they will be utilizing Workday as a repository for the required NIMS training. Code Enforcement shared that they are going around the city conducting a presentation on the services they provide. The Police Department is engrossed in transition of the Ontario International Airport. PD also advised of many career opportunities at the department. The Museum has a great model colony exhibit on current display. Building shared that they have had $400 million of recent development projects. Solid Waste shared of an upcoming Community Cleanup

event at City Yard. Water Utilities has a $20 million recycled water project. Planning is getting 3-4 new projects a week with development in the Ontario Ranch area picking up. Engineering is also getting more projects in the city with two major storm drain projects and a grade separation project. Municipal Services has been busy keeping up with city growth including adding additional vehicles to the city fleet.

Action Items -

- Email Ray at least one EMWC objective
- Update EMWC and EOC roster
- Confirm satellite phone list owners and numbers
- Conduct Shakeout drill on 10/20 at 10:20 AM
- Come up with desired topics and meeting locations

Next Meetin

Date/Time:	November 10, 2016 – 10:00-11:30 AM
Location:	EOC
Topics:	LHMP Projects

City of Ontario
Emergency Management Working Committee
Agenda

November 10, 2016 – 10:00-11:30 AM
Emergency Operations Center

Joe Minasso, Andy Marquez, Scott Murphy, Anita Argueta, Marilyn Bonus, David Coote, Mauricio Diaz, Mike Pelletier, Tony Coletta, Brian Acosta, Pascal Pangestu, Nancy Morales, Michelle Sifuentes, Lorena Mejia, Bill Russell, Kathy Garozzo, Janet Dorsett, and Raymond Cheung were in attendance.

II. The EMWC Mission Statement was approved by the Committee:
The Emergency Management Working Committee works as a cohesive team to increase the city's disaster resiliency, ensure continuity of city services, and save lives, property, and the environment from harm in the City of Ontario and beyond.

a. A review of submitted goals and objectives was conducted. It was decided that the primary objective for 2017 would be to conduct an extensive training and exercise of EOC and DOC related functions and responsibilities.

III. Local Hazard Mitigation Plan (LHMP)
a. A list of Critical Facilities needs to be updated in order to create an accurate Vulnerability Assessment. Please look over the Excel spreadsheet and contact Ray if any facilities need to be updated or added as soon as possible.
b. The Committee reviewed and updated the status of the Mitigation Projects from the 2011 plan. Several additional projects were identified. Any other projects are due by September 30th.

IV. Events
a. Deputy Chief Pelletier gave an overview of the State St. Fire that occurred on October 19th. 82 personnel responded to that incident with over 4 million gallons of water used to extinguish the blaze.
    i. A tabletop exercise was conducted with a scenario replicating the State St. Fire, but adding Santa Ana winds. Groups were divided into ICS sections to discuss how the EOC would respond to such a situation.

V. Don Meyer gave an overview of what we expecting during the upcoming La Nina winter weather season. The weather service is forecasting our area to receive 33% below normal rainfall and 40% above normal temperature.

VI. Training

a. Reed Sigler gave an overview of the new onboarding procedure all new employees are now receiving through WorkDay. Additionally, all NIMS certificates will be uploaded and tracked in Workday as well.

VII. Exercises

a. The After Action comments for the ShakeOut exercise were reviewed. Ares of success included the Drop, Cover, Hold-on drill, holding an accountability drill and discussing with staff on post-EQ procedures. Additional improvements that could be made were better evacuation maps, the PA system not being heard in many locations, the necessity of a communication plan if cell network unavailable, the need to keep personal emergency kits updated.

VIII. EOC / Technology

a. Additional city meeting locations were identified including the City Library, the City Yard at Bon View, City Community Rooms, and Police Department Community Rooms.
b. The AlertOntario website is where city residents can register their cell phones and email addresses in the city Everbridge emergency notification system. The portal can be accessed off the read ontario.com website.

IX. Roundtable – No comments.

Next Meetin

Date/Time:	December 8, 2016 – 10:00-11:30 AM
Location:	TBD
Topic:	2017 Training and Exercise Calendar

City of Ontario
Emergency Management Working Committee
Minutes

December 8, 2016 – 10:00-11:30 AM
Emergency Operations Center

DeSousa, David Coote, Mauricio Diaz, Antonio Alejos, Mike Pelletier, Brian Acosta, Giancarlo Mezza, Craig Grabow, Reed Sigler, Pascal Pangestu, Anna Vaca, Alan Saegar, Michelle Sifuentes, Don Meyer, Joe Minasso, Andy Marquez, Julie Dorey, Janny Pan, Kathy Garozzo, and Raymond Cheung.

II. Local Hazard Mitigation Plan (LHMP)

a. Hazard Identification Review – The committee reviewed the hazard identification survey results and following a discussion, approved the following top five hazards:

1. Earthquake
2. Extreme Weather (High winds, Severe Storm, Flooding, Climate Change)
3. Hazardous Materials
4. Transportation Accident (Aircraft, Train)
5. Urban Fire

III. Planning

a. EOC Organization – The committee approved changing the name of the Health and Welfare Branch to the Care and Shelter Branch and added a Medical Branch and a Volunteer/Donations Management Unit.

b. Position Rosters – The committee was advised that Raymond will be reaching out to individual departments to gather names for the EOC position rosters. **Position assignments are due by December 22nd.**

IV. Events

a. Santa Ana Wind Event – The wind event on December 2nd was discussed. The city experienced three power failures at city well pumps. In addition, 40 city trees were felled by the winds, costing approximately $18,000 in cleanup costs. One fire engine was also damaged by a fallen tree.

i. Cost/damage tracking discussion – Fiscal Services informed the committee that response costs can be assigned a program code for tracking purposes. Further discussion will be needed to create a system to initiate and document emerging incident costs.

V. Training & Exercises

a. Training and Exercise Workshop – After discussion, the committee decided to establish a six-month cycle for training EOC responders. Each cohort will take all the trainings together and at the end will fulfill most of the general requirements for credentialing by the California Governor's Office of Emergency Services (CalOES). **Attendees for this first cohort are due by December 22nd.** The following schedule was set by the committee (the January Information/Resource Management training was changed due to a conflict).

EOC Academy Training Schedule – Cohort 1

January 25	Information/Resource Management - WebEOC
January 26	G-606 SEMS/NIMS Combined
February 22-23	G-775 EOC Management and Ops
March 23	G-191 ICS/EOC Interface / Mobilization Drill
April 20	G-626E Essentials of EOC Action Planning
April 24-27	G-611 Section Training April 24 – Management / Finance April 25 – Operations April 26 – Logistics April 27 - Planning
May 18	Tour of California Functional Exercise

VI. Roundtable

Next Meeting

Date/Time:	January 12, 2017 – 10:00-11:30 AM
Location:	TBD
Topic:	Operational Communications

November 29, 2017

10:00 - 11:30 AM

Ovitt Family Community Library

Agenda

1. Welcome and Introductions
2. Purpose
3. Introduction to City of Ontario – Office of Emergency Management
4. Resources and Readiness Tools
5. Roundtable Discussion
6. Next Steps

uld like to invite you to join us for our Partners in
where you can learn how to best prepare your House
as well as how you can help the City respond and
recover from any kind of emergency.

0 MBER 29, 2017
10:00 AM 11:30 AM

OVITT FAMILY COMMUNITY LIBRARY
215 E. C STREET
ONTARIO, CA 91764

The workshop will cover the following topics:

- Individual and Family Preparedness within your House of Worship
- How the City operates during an emergency or disaster and where you fit in
- Getting involved in disaster response and recovery
- How to develop an Emergency Operations Plan for your House of Worship
- Connecting with partners and resources to help your House of Worship prepare for emergencies

Register for FREE today at www.ontariofaith.eventbrite.com

CITY OF ONTARIO

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