2018

LOCAL HAZARD MITIGATION PLAN

CITY OF RIVERSIDE

Approved by FEMA July 30, 2018

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City of Riverside ANNEX

1/1/2018

CITY OF RIVERSIDE - ANNEX
LOCAL HAZARD MITIGATION PLAN
2018

CONTACT INFORMATION

CITY OF RIVERSIDE

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PLAN ADOPTION/RESOLUTION

The City of Riverside will submit plans to Riverside County Emergency Management Department who will forward to California Governor's Office of Emergency Services (CAL OES) for review prior to being submitted to the Federal Emergency Management Agency (FEMA). In addition, we will wait to receive an "Approval Pending Adoption" letter from FEMA before taking the plan to our local governing bodies for adoption. Upon approval, the City of Riverside will insert the signed resolution.

EXECUTIVE SUMMARY

The purpose of the City of Riverside Local Hazard Mitigation Plan (LHMP) is to evaluate and assess the risks identified hazards pose to the city, review and assess past disaster occurrences and through the engagement of the whole community set goals to mitigate potential risks to reduce or eliminate long-term risk to people, property and environment from natural, man-made and technological hazards.

The Riverside Fire Department – Office of Emergency Management coordinated the development and update to the 2012 City of Riverside LHMP Annex to address planning considerations unique to the City of Riverside.

This 2017 LHMP is a plan update that was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 to achieve eligibility and potentially secure mitigation funding through Federal Emergency Management Agency (FEMA) Flood Mitigation Assistance, Pre-Disaster Mitigation, and Hazard Mitigation Grant Programs.

The City of Riverside LHMP Annex integrates with the Riverside County Operational Area Multi-Jurisdictional Local Hazard Mitigation Plan and provides a uniform approach to community mitigation efforts.

The City's planning process followed a methodology presented by FEMA and Cal OES which included conducting meetings coordinated by Riverside Fire Department – Office of Emergency Management. These meetings were comprised of participating Federal, State and local jurisdictions, departments, agencies, special districts, school districts, non-profit communities, universities, businesses and general public.

The plan identifies vulnerabilities, provides recommendations for prioritized mitigation actions, evaluates resources and identifies mitigation shortcomings, provides future mitigation planning and maintenance of existing plan.

The plan is implemented upon FEMA approval, and adoption by City Council.

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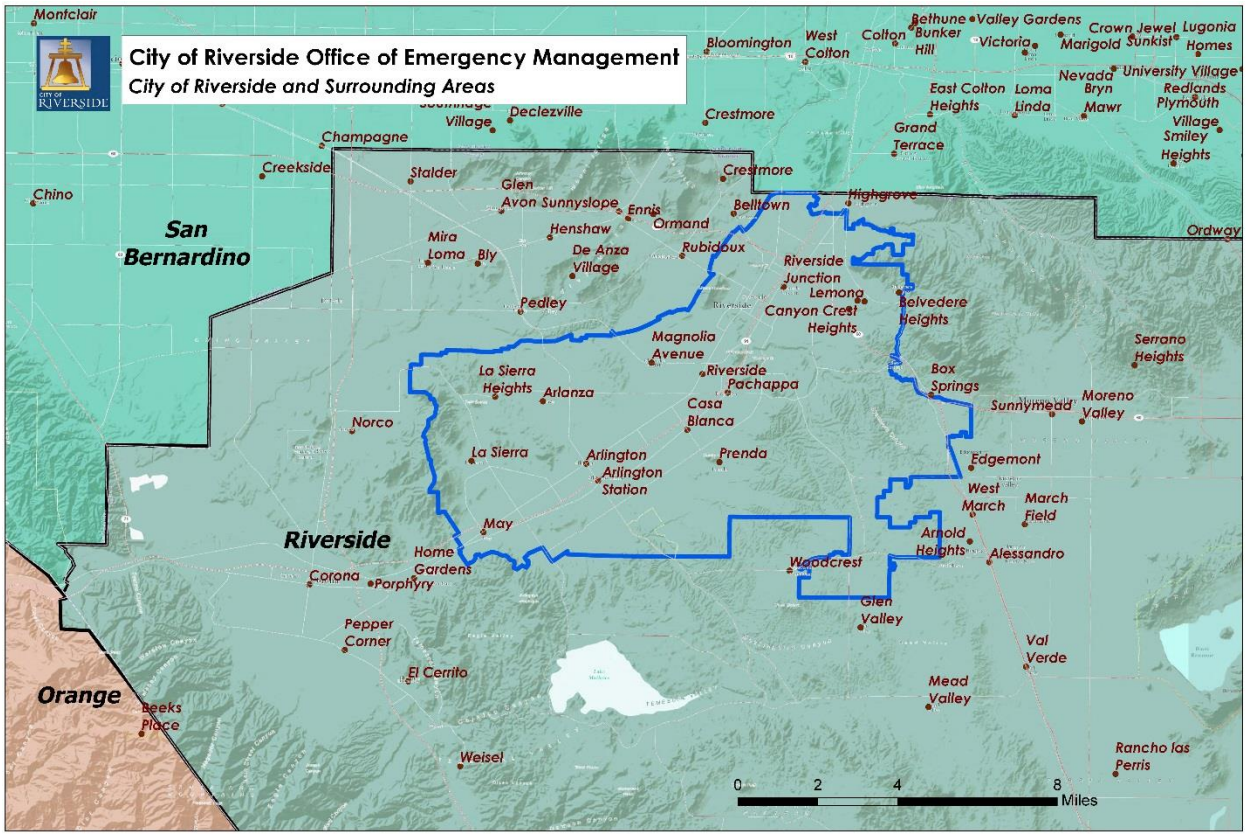
SECTION 1.0 - COMMUNITY PROFILE

1.1 CITY MAP



1.2 GEOGRAPHY AND CLIMATE DESCRIPTION

The City of Riverside is located in Riverside County, California, United States, and is the county seat. Named for its location beside the Santa Ana River, it is located at the center of the Inland Empire and is the largest city in the Riverside-San Bernardino-Ontario metropolitan area of Southern California, the 4th largest inland California City and is located approximately 60 miles (97 km) east of Los Angeles. Riverside is the 59th most populous City in the United States and the 12th most populous city in California. The City of Riverside is currently 81 square miles. According to the California Department of Finance, Riverside has a 2017 estimated population of 326,792.

The City of Riverside sits in a valley surrounded by small mountain areas as well as large mountain ranges such as the San Jacinto and San Bernardino mountains. Within the City, surface elevations range from 700 feet above mean sea level near the Santa Ana River to over 1,400 feet west of La Sierra Avenue. The highest point in the sphere of City's Sphere of Influence is Arlington Mountain, standing 1,853. The City's downtown elevation is 860 feet.

The County seat for the County of Riverside is located in the City of Riverside, along with numerous State and Federal facilities. Riverside is situated along two major freeway systems; both of these freeways bisect the City. Along the northern edge of the City runs Highway 60 and is considered a primary east-west freeway link flowing traffic and goods westward to the Los Angeles metropolitan area and easterly to the Arizona border and beyond. The 91/215 freeway traverses the center portion of the City and is a primary north and south route for traffic and goods connecting Los Angeles metropolitan area to Las Vegas, Salt Lake City and beyond.

Major railway freight and passenger traffic follows the 91/215 freeway through the City leading from the Ports of Los Angeles and Long Beach to the San Bernardino/Colton rail yards, where the railcars are re-assembled for connections to northern and eastern portions of the country.

The City of Riverside is home to four large college campuses: University of California at Riverside, California Baptist University, La Sierra University and Riverside Community College. With the exception of Riverside Community College, each of these campuses houses students throughout the academic year. The University of California at Riverside, an important agricultural, research, and engineering university, attracts students from throughout the world. K-12 education is provided by two school districts, Riverside Unified and Alvord Unified, with a total of (40) elementary schools, (11) middle schools, and (12) high schools. In addition the Riverside County Office of Education is headquartered in Riverside and supports (1) regional learning center, (7) Head Start Programs, (2) School of Career Education sites, as well as providing education at: (1) community school, (6) Welcome Back Kids Programs; and (2) Detention Centers within the city limits. There are also a number of private schools including Sherman Indian High School (houses students throughout the academic year) and the California School for the Deaf.

Other attractions in Riverside include the Fox Performing Arts Center, Riverside Metropolitan Museum, which houses exhibits and artifacts of local history, the California Museum of Photography, the California Citrus State Historic Park, and the Parent Washington Navel Orange Tree, one of the two original orange trees in California.

The City is served by three major hospitals (Kaiser, Riverside Community, and Parkview Community).

Riverside experiences a semi-arid or an arid Mediterranean climate with hot, dry summers and mild, relatively wet winters. Temperatures in the summer can exceed 95°F (35°C) but with low humidity. In the winter, high temperatures may not rise above 55°F (13°C) during rainy days. On average, January is the coldest month with an average high/low of 68°F/43°F (20°C/6°C) while August is the hottest with a high/low of 95°F/64°F (35°C/18°C). Riverside receives 10.22" of precipitation annually with most of it occurring in the winter and early spring, especially January through March, with January being the wettest month. However, during El Nino years, Southern California can receive considerably more precipitation and cooler temperatures than average.

Figure 1.2.1 – Table – Climate Data for City of Riverside

Climate data for Riverside

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °F (°C)	97 (36)	92 (33)	98 (37)	104 (40)	108 (42)	112 (44)	113 (45)	112 (44)	113 (45)	108 (42)	98 (37)	93 (34)	117 (47)
Average high °F (°C)	66 (19)	68 (20)	70 (21)	76 (24)	80 (27)	87 (31)	94 (34)	94 (34)	91 (33)	83 (28)	74 (23)	68 (20)	78.9
Average low °F (°C)	42 (6)	44 (7)	45 (7)	48 (9)	53 (12)	57 (14)	61 (16)	62 (17)	60 (16)	53 (12)	45 (7)	41 (5)	54.9
Record low °F (°C)	24 (−4)	27 (−3)	29 (−2)	33 (1)	38 (3)	44 (7)	49 (9)	49 (9)	42 (6)	32 (0)	26 (−3)	22 (−6)	22 (−6)
Precipitation inches (mm)	2.47 (62.7)	2.39 (60.7)	2.19 (55.6)	.60 (15)	.25 (6.4)	.10 (3)	.03 (0.8)	.17 (4.3)	.26 (6.6)	.26 (6.6)	.78 (19.8)	1.17 (29.7)	10.67 (271)

1.3 BRIEF HISTORY

On March 20, 1774, Juan Bautista De Anza, leading an exploratory expedition to find a good land route from southern Mexico to Alta California, reached what is today known as Riverside.

Riverside was founded in the early 1870s and is the birthplace of the California citrus industry. Founded by John W. North and a group of Easterners who wished to establish a colony dedicated to furthering education and culture. Riverside was built on land that was once a Spanish rancho. Investors from England and Canada transplanted traditions and activities adopted by prosperous citizens: the first golf course and polo field in Southern California were built in Riverside.

The first orange trees were planted in 1871, but the citrus industry in Riverside began two years later when Eliza Tibbets received two Brazilian navel orange trees sent to her by a friend at the Department of Agriculture in Washington. The trees thrived in the Southern California climate and the navel orange industry grew rapidly. Within a few years, the successful cultivation of the newly discovered navel orange led to a California Gold Rush of a different kind: the establishment of the citrus industry. By 1882, there were more than half a million citrus trees in California, almost half of which

were in Riverside. By the mid-1880s five packing houses sprang up in Riverside. The Santa Fe Railroad opened a direct line to Riverside in 1886 allowing direct shipment to the east. Eight years later the first refrigerated rail cars shipped oranges from Riverside to the east on the Santa Fe Railroad. The development of refrigerated railroad cars and innovative irrigation systems established Riverside as the wealthiest City per capita by 1895.

About 1875, Matthew Gage began work on a canal to bring water to all of Riverside, parts of which had no water available. With the irrigation made possible by Gage's canal, Riverside's greatest growth period began. Three new subdivisions—White's Addition, Hall's Addition, and Arlington Heights—were developed.

One of the first documented “disaster incidents” was on April 17, 1908 when there was an elephant stampede in Downtown Riverside. The elephant leading the stampede was named Floto. Floto was owned by the circus Sells-Floto Circus. The incident occurred when a Standard Oil wagon caught fire and ignited several of the circus tents. Frightened by this undue excitement, the herd of elephants became uncontrollable and charged through the east side of town, knocking down fences, outhouses and despoiling orchards.

During World War I, March Field, now March Air Reserve Base was established for the training of aviators. During World War II, March Field was expanded and another base, Camp Haan, was started across from March Field. The site is now occupied by the new National Veteran's Cemetery. A third base was built, called Camp Anza, which later became a City subdivision, called Arlanza.

As the City prospered, a small guest hotel designed in the popular Mission Revival style grew to become the world famous Mission Inn, favored by presidents, royalty and movie stars. Postcards of lush orange groves, swimming pools, and magnificent homes have attracted vacationers and entrepreneurs throughout the years. Many relocated to the warm, dry climate for reasons of health and to escape Eastern winters.

Riverside has over 100 City Landmarks, 20 National Register Sites and 2 National Landmarks have been designated by the City Council, all offering enjoyment and education to City residents and visitors. Examples include the Mission Inn, the Chinatown site, the National Packing House, Citrus Experiment Station and engineering feats like the Gage Canal. Many of these landmarks are found in the Downtown's Mission Inn Historic District. California's Mission Revival style, born in Riverside, can be seen throughout the City, most notably in the Mission Inn, the Municipal Auditorium, First Church of Christ Scientist, and the Fox Theater, home of the Riverside International Film Festival.

The Mission Inn was developed from the Glenwood Tavern, owned by Captain Christopher Columbus Miller, who moved to Riverside in 1874 to survey land for the Gage Canal, which brought water to Riverside. His son Frank developed a lasting interest in culture and the arts and took over the expansion of the Inn. Over the years he embellished and expanded it into a unique resort known all over the world. It has played host to numerous movie stars, musicians and heads of state. Ronald and Nancy Reagan honeymooned there, and Richard and Pat Nixon were married on its grounds. Teddy Roosevelt planted a tree in its courtyard, and a special chair, built for President William Howard Taft when he visited, is still in the Inn's collection.

1.4 ECONOMY DESCRIPTION

The City has seven distinct economic factors. These factors show the diversity of the City as it develops from a bedroom and agricultural community to a City of expanding activity. These factors are:

- Residential/Bedroom Community
    - Both long-term permanent housing and short-term temporary college dormitory housing
- Industrial/Warehouse
- Arts and Culture
- Agriculture
- Military
- Education - College/University Level
    - University of California, Riverside
    - California Baptist University
    - La Sierra University
    - Riverside Community College
- Major Medical Care
    - Three major primary hospitals for the region and several Senior Care Facilities

Figure 1.4.1 – Table Listing City of Riverside Major Employers

#	Employer	# of Employees
1	County of Riverside	11,628
2	University of California, Riverside	7,500
3	Riverside Unified School District	3,500
4	Kaiser Permanente	4,500
5	City of Riverside	2,461
6	Riverside Community Hospital	1,900
7	Riverside County Office of Education	1,765
8	Alvord Unified School District	1,445
9	Parkview Community Hospital	1,350
10	Riverside Community College District	1,061

1.5 POPULATION AND HOUSING

The 2017 population of the City of Riverside from the California Department of Finance was estimated at 326,792.

Figure 1.5.1 Population Characteristics – City of Riverside

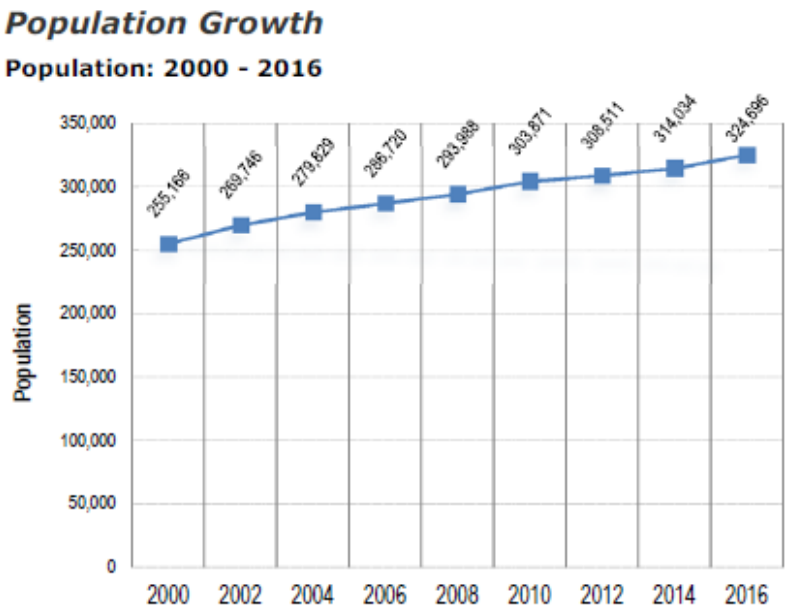
2016 STATISTICAL SUMMARY

Category	Riverside	Riverside County	Riverside Relative to Riverside County*	SCAG Region
2016 Total Population	324,696	2,347,828	[13.8%]	18,954,083
2016 Population Density (Persons per Square Mile)	4,002	324	3,678	489
2016 Median Age (Years)	32.1	34.8	-2.7	36.0
2016 Hispanic	52.9%	48.1%	4.8%	46.8%
2016 Non-Hispanic White	30.9%	36.4%	-5.5%	31.2%
2016 Non-Hispanic Asian	6.8%	6.2%	0.6%	12.7%
2016 Non-Hispanic Black	6.1%	6.0%	0.1%	6.3%
2016 Non-Hispanic American Indian	0.4%	0.5%	-0.1%	0.3%
2016 All Other Non-Hispanic	2.8%	2.9%	-0.1%	2.7%
2016 Number of Households	94,845	713,205	[13.3%]	6,132,938
2016 Average Household Size	3.3	3.2	0.1	3.1
2016 Median Household Income	$55,999	$57,367	-$1,368	$61,792
2016 Number of Housing Units	99,859	828,383	[12.1%]	6,629,879
2016 Homeownership Rate	55.7%	54.3%	1.4%	54.3%
2016 Median Existing Home Sales Price	$350,000	$332,000	$18,000	$466,000
2015 - 2016 Median Home Sales Price Change	9.4%	7.1%	2.3%	6.6%
2016 Drive Alone to Work	79.0%	80.9%	-1.9%	78.8%
2016 Mean Travel Time to Work (minutes)	32.0	35.0	-3.0	31.0
2015 Number of Jobs	136,185	709,940	[19.2%]	7,920,602
2014 - 2015 Total Jobs Change	4,343	27,752	[16%]	117,499
2015 Average Salary per Job	$46,463	$42,060	$4,403	$53,962
2016 K-12 Public School Student Enrollment	57,612	423,183	14%	2,961,726

Source: Sources: U.S. Census Bureau American Community Survey, 2015; Nielsen Co.; California Department of Finance E-5, May 2016; CoreLogic/DataQuick; California Department of Education; and SCAG * Numbers with [ ] represent Riverside's share of Riverside County. The other

numbers represent the difference between Riverside and Riverside County. Mapped jurisdictional boundaries are as of July 1, 2016 and are for visual purposes only. Report data, however, are updated according to their respective sources.

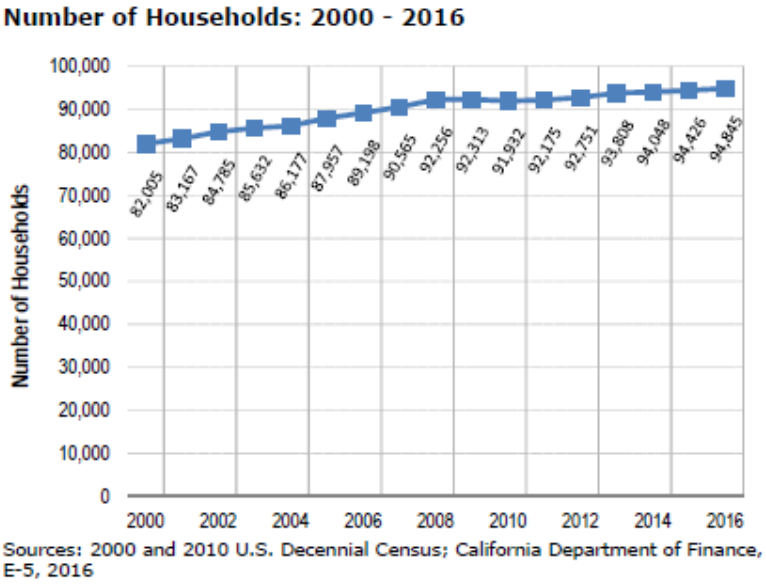
Figure 1.5.2 Population Growth Chart – 2000 Comparison to 2016

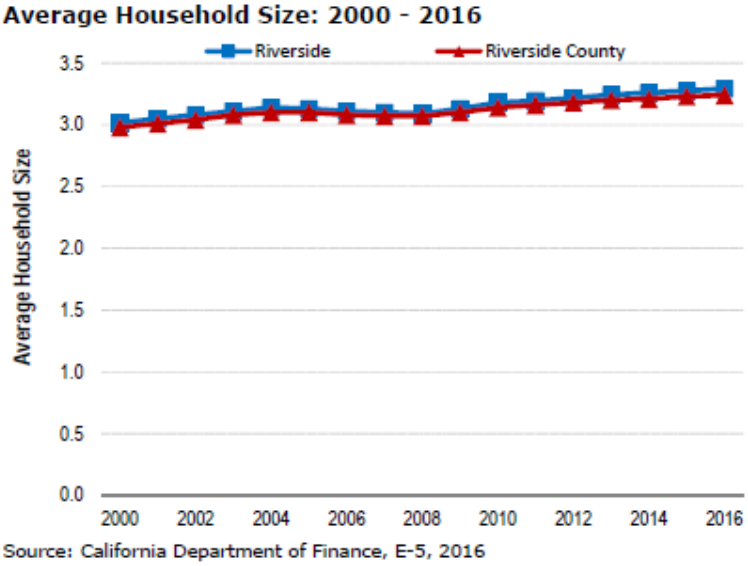


Source: California Department of Finance, E-5, 2016

- Between 2000 and 2016, the total population of the City of Riverside increased by 69,530 to 324,696 in 2016.
- During this 16-year period, the city's population growth rate of 27.2 percent was lower than the Riverside County rate of 51.9 percent.
- 13.8% of the total population of Riverside County is in the City of Riverside.

Figure 1.5.3 Housing Characteristics – City of Riverside





- Between 2000 and 2016, the total number of households in the City of Riverside increased by 12,840 units, or 15.7 percent.
- During this 16-year period, the city's household growth rate of 15.7 percent was lower than the county growth rate of 40.9 percent.
- 13.3 percent of Riverside County's total number of households are in the City of Riverside.
- In 2016, the city's average household size was 3.3, higher than the county average of 3.2.

1.6 DEVELOPMENT TRENDS AND LAND USE

The City of Riverside continues to grow in all areas. In 2017 the Riverside Community Hospital will open up a $420 million expansion of the hospital consisting of an additional 105 rooms. Approximately 38 single family, senior, and multi-family residential projects with a total of 3,210 units are currently in the planning pipeline. Two new hotels are slated for development in the downtown area. Industrial warehouses are being built within the city limits as well adjacent to the city in the March Joint Powers area.

Figure 1.6.1

LOCAL JURISDICTION DEVELOPMENT TRENDS QUESTIONNAIRE 2017

JURISDICTION: Riverside	DOES YOUR AGENCY HAVE RESPONSIBILITY FOR LAND USE AND/OR DEVELOPMENT ISSUES WITHIN YOUR JURISDICTIONAL BOUNDARIES? YES			
	2012 DATA	2017 DATA		2022
Current Population in Jurisdiction or Served	310,674	326,792*	Projected Population in Jurisdiction or Served - in 2022	337,786
Current Sq Miles in Jurisdiction or Served	81	81	Projected Sq Miles in Jurisdiction or Served - in 2022	81
Does Your Jurisdiction have any ordinances or regulations dealing with disaster mitigation, disaster preparation, or disaster response?	Yes	Yes	If yes, please list ordinance or regulation number. RMC 9.20	
What is the number one land issue your agency will face in the next five years	Affordable housing. Controlling commercial & residential developments to limit the number of vacant homes and commercial buildings. Dealing with aged and obsolete housing and commercial buildings.			
Approximate Number of Homes/Apts/etc.	98,444	107,325	Projected Number of Homes/Apts/etc.- in 2022	116,206
Approximate Total Residential Value	229,497,575.00		Projected Residential Total Value - in 2022	n/a
Approximate Number of Commercial Businesses	22,621		Projected Number of Commercial Businesses - in 2022	
Approximate Percentage of Homes/Apts/etc in flood hazard zones	35	35	Approximate Percentage of Homes/Apts/etc in flood hazard zones - in 2022	35
Approximate Percentage of Homes/Apts/etc in earthquake hazard zones	100	100	Approximate Percentage of Homes/Apts/etc in earthquake hazard zones - in 2022	100
Approximate Percentage of Homes/Apts/etc in wildland fire hazard zones	10	10	Approximate Percentage of Homes/Apts/etc in wildland fire hazard zones - in 2022	10
Approximate Percentage of Commercial Businesses in flood hazard zones	35	35	Approximate Percentage of Commercial Businesses in flood hazard zones - in 2022	35
Approximate Percentage of Commercial Businesses in earthquake hazard zones	100	100	Approximate Percentage of Commercial Businesses in earthquake hazard zones - in 2022	100
Approximate Percentage of Commercial Businesses in wildland fire hazard zones	10	10	Approximate Percentage of Commercial Businesses in wildland fire hazard zones - in 2022	10
Number of Critical Facilities in your Jurisdiction that are in flood hazard zones	40	40	Projected Number of Critical Facilities in your Jurisdiction that are in flood hazard zones - in 2022	
Number of Critical Facilities in your Jurisdiction that are in earthquake hazard zones	183	183	Number of Critical Facilities in your Jurisdiction that are in earthquake hazard zones - in 2022	
Number of Critical Facilities in your Jurisdiction that are in wildland fire hazard zones.	10	10	Number of Critical Facilities in your Jurisdiction that are in wildland fire hazard zones - in 2022	
Does your jurisdiction plan on participating in the County's on-going plan maintenance program every two years as described in Part I of the plan?	Yes		If not, how will your jurisdiction do plan maintenance?	
Will a copy of this plan be available for the various planning groups within your jurisdiction for use in future planning and budgeting purposes?				Yes

*State of California, Department of Finance, *E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2016 and 2017.* Sacramento, California, May 2017.

SECTION 2.0 - PLANNING PROCESS

2.1 LOCAL PLANNING PROCESS

The City of Riverside participated in various LHMP planning meetings since 2012 in anticipation of updating the LHMP Plan as well as updating the City's Safety Element of the General Plan.

The City of Riverside's Office of Emergency Management works closely with the representatives from various City department's (See Table 2.1) on the development of updates for the City's General Plan's Safety Element and this Local Hazard Mitigation Plan. OEM reached out to departments via in person meetings, phone calls and email to seek representation on the LHMP Planning Team. Department Representatives were invited to meetings via email. Meetings were held to discuss, identify, and prioritize appropriate mitigation strategies. The group was presented with an overview of the identified threats to the City and surrounding areas. There was a discussion of several mitigation efforts identified by the City. An assessment and ranking of hazards was conducted by the city LHMP Planning Team in 2016. Input from the public was sought via a survey and town halls in 2016 to gather information on how the public viewed hazards and possible mitigation strategies.

LHMP Planning Meetings with the City of Riverside Departments were held on:

- 11/4/2015
- 11/19/2015
- 12/16/2015
- 1/20/2016
- 2/17/2016
- 3/23/2016
- 4/06/2016
- 5/11/2016
- 6/8/2016
- 5/24/2017

Table 2.1 City LHMP Planning Team

Department	Position
City Attorney	Assistant City Attorney
City Clerk	Assistant City Clerk
Finance	Purchasing/Risk Management

Community & Economic Development	Sr. Planner
Community & Economic Development	Principal Planner
Community & Economic Development	Building Official
Fire Department	Division Chief/Fire Marshal
Fire Department Office of Emergency Management	Emergency Services Administrator
Fire Department Office of Emergency Management	Emergency Services Coordinator
General Services	Operations Superintendent
Library	Administrative Services Manager
Museum – Arts & Culture	Project Development Coordinator
Parks, Recreation & Community Services	Administrative Analyst
Public Works	Emergency Services Coordinator
Public Utilities	Principal Engineer

Community Partner meetings were held to discuss specific hazards and their threats to our community partners such as Riverside School District, Riverside Community College, UCR, Riverside Community and Kaiser Hospitals, Riverside County Schools, etc. The group was presented with an overview of the identified threats to the City and surrounding areas. There was a discussion of several mitigation efforts identified by the City.

Community Partners Meetings and Outreach:

- 1/20/2016 - CERT
- 2/2/2016 – Education
- 2/24/2016 – Hospitals
- 4/2/2016 – Hospitals

In addition, the following agencies have provided written and/or oral comments during the drafting process and at Community Partnership, City LHMP Planning meetings, OA Jurisdiction Planning meetings, and/or via email and telecommunication:

- City of Moreno Valley
- City of Corona
- California Baptist University
- March Air Reserve Base
- Parkview Community Medical Center
- Riverside City College
- Riverside County Office of Education

- Riverside Unified School District

The chart in Section 3.3 indicates the scoring by the planning group during the 2016 planning sessions.

At the beginning of the planning process un-reinforced masonry buildings and asbestos were discussed however they were not added to the list of hazards to be ranked.

2.2 PARTICIPATION IN REGIONAL (OA) PLANNING PROCESS

The City and its Community Partners participated in workshops and meetings conducted by Riverside County. Below is a list of those meetings:

Planning Meetings presented by the County of Riverside:

- April 14, 2016 – OAPC in Beaumont
- July 14, 2016 – OAPC in Beaumont
- December 8, 2016 – LHMP Workshop at Riverside EMD
- February 7, 2017 – LHMP Cities Workshop at Riverside EMD
- April 3, 2017 Mitigation Planning for Local Communities Training with one-on-one technical assistance in Riverside.
- June 6, 2017 LHMP Cities Workshop at Riverside EMD

2.3 DATES AVAILABLE FOR PUBLIC COMMENT

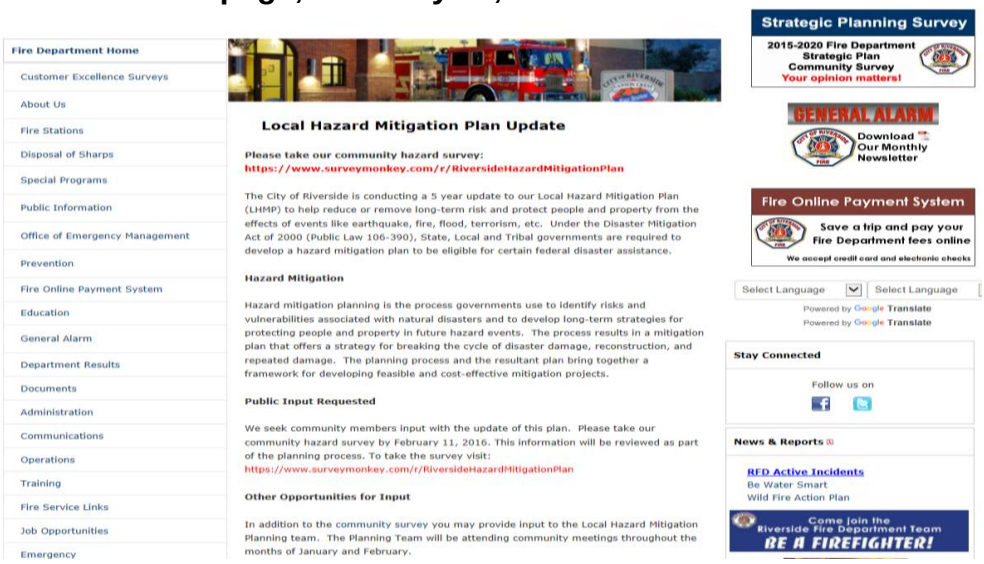
A one month public comment period was held from January 11 – February 11, 2016, during which a survey was provided to the community using the City's website, town hall meetings and the through the public library system. The survey was promoted via a press release, social media, website, and via an email blast to 25,279 registrants to the Parks newsletter. The survey results consisted of a representative group of community members from the City. There was a discussion of several mitigation efforts identified by the City. An assessment and ranking of hazards was conducted by the community members who turned in 175 completed surveys the results of which is shown on the table below. The survey also sought input on risk reduction methods and projects to reduce hazard related losses. A one-week public comment period of the Public Review Draft was held from June 6 – June 14, 2017. The public comment period was promoted via media release, social media accounts, email and at a CERT meeting that took place during the comment period. (See Appendix A for copies of survey flyers and sign-in sheets.)

Public Meetings Were Held on:

- 1/11/2016 – Ward 1 – Northside Improvement Association
- 1/12/2016 – City Council Presentation to Promote Survey
- 1/13/2016 – Ward 2 – Lincoln Park Neighborhood Group
- 1/13/2016 – Ward 3 – M.A.N.A. Group
- 1/13/2016 – Ward 4 – Community Action Group
- 1/14/2016 – Ward 2 – University Neighborhood Group
- 1/14/2016 – Riverside County OAPC
- 1/18/2016 – Ward1 – Downtown Area Neighborhood Alliance
- 1/25/2016 – Ward 1 – Neighbors of Mt. Rubidoux
- 1/27/2016 – Ward 7 – Ward Meeting @ La Sierra Senior Center
- 02/4/2016 – Ward 2 – Eastside Forum
- 2/8/2016 – Ward 1 – Northside Improvement Association
- 2/10/2016 – Ward 2 – Lincoln Park Neighborhood Group
- 2/11/2016 – Ward 3 – M.A.N.A. Group
- 2/11/2016 – Ward 4 – Ward 4 Community Meeting @ Orange Terrace CC
- 9/21/2016 – Public Safety Committee Presentation
- 6/6/2017 – City Council Presentation to Promote Open Comment Period for LHMP Draft

In addition an LHMP webpage was created to allow feedback to be submitted at any time. This webpage was linked to from the City of Riverside's main site, www.riversideca.gov, as well as at the direct link of https://www.riversideca.gov/fire/oem/hazard.asp.

Figure 2.3.1 LHMP Webpage, February 15, 2016.



Fire Department Home
- Customer Excellence Surveys
- About Us
- Fire Stations
- Disposal of Sharps
- Special Programs
- Public Information
- Office of Emergency Management
- Prevention
- Fire Online Payment System
- Education
- General Alarm
- Department Results
- Documents
- Administration
- Communications
- Operations
- Training
- Fire Service Links
- Job Opportunities
- Emergency

Local Hazard Mitigation Plan Update

Please take our community hazard survey:
https://www.surveymonkey.com/r/RiversideHazardMitigationPlan

The City of Riverside is conducting a 5 year update to our Local Hazard Mitigation Plan (LHMP) to help reduce or remove long-term risk and protect people and property from the effects of events like earthquake, fire, flood, terrorism, etc. Under the Disaster Mitigation Act of 2000 (Public Law 106-390), State, Local and Tribal governments are required to develop a hazard mitigation plan to be eligible for certain federal disaster assistance.

Hazard Mitigation

Hazard mitigation planning is the process governments use to identify risks and vulnerabilities associated with natural disasters and to develop long-term strategies for protecting people and property in future hazard events. The process results in a mitigation plan that offers a strategy for breaking the cycle of disaster damage, reconstruction, and repeated damage. The planning process and the resultant plan bring together a framework for developing feasible and cost-effective mitigation projects.

Public Input Requested

We seek community members input with the update of this plan. Please take our community hazard survey by February 11, 2016. This information will be reviewed as part of the planning process. To take the survey visit:
https://www.surveymonkey.com/r/RiversideHazardMitigationPlan

Other Opportunities for Input

In addition to the community survey you may provide input to the Local Hazard Mitigation Planning team. The Planning Team will be attending community meetings throughout the months of January and February.

Strategic Planning Survey
2015-2020 Fire Department Strategic Plan Community Survey
Your opinion matters!

GENERAL ALARM
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Be Water Smart
Wild Fire Action Plan

Come join the Riverside Fire Department Team
BE A FIREFIGHTER!

Figure 2.3.2 2016 Ranking Community Survey- City of Riverside

HAZARD	Community Survey
Earthquake	1
Flooding	12
Drought	2
Terrorism	6
Wildland Fire	11
Power Outage	3
Severe Weather: Extreme Heat	4
Severe Weather: Wind Event	9
Transportation Accidents – Rail/Aircraft/Highway	7
Water System	5
Hazmat Accidents - Industrial	16
Cyber Security	8
Gas/Fuel Pipeline	13
Severe Weather: Winter Weather	20
Communication Outage	14

Sewer System	15
Terrorism – Attack Against Agricultural	19
Pandemic/Disease/Contamination	10
Dam Failure/Inundation	23
Insect Infestation	17
Civil Unrest	18
Landslide	21
Nuclear Accidents - SONGS	24
Tornado	25
Jail/Prison Event	22

2.4 PLANS ADOPTED BY RESOLUTION

Upon approval by FEMA, the LHMP will be presented to the City of Riverside City Council in a public meeting for adoption via an official Resolution.

SECTION 3.0 – MITIGATION ACTIONS/UPDATES

3.1 UPDATES FROM 2012 PLAN

The following hazards were added since the approval of the 2012 plan: Cyber Security and Communications Outage. Additionally Tornado was separated out from Severe Wind and Summer/Winter Weather was separated as Extreme Heat and Winter Weather.

3.2 LIST OF COUNTY AND CITY HAZARDS CROSSWALK

County Hazard	City Hazard
Earthquake	Earthquake
Pandemic Flu	Pandemic/Disease/Contamination
Wildland Fire	Wildland Fire
Electrical Failure	Power Outage
Emergent Disease/Contamination	See Pandemic/Disease/Contamination

Cyber Attack	Cyber Security
Terrorist Event	Terrorism – Humans/Structures
Communications Failure	Communications Outage
Flood	Flooding
Civil Disorder	Civil Unrest
Climate Change	Impacts multi hazards
Drought	Drought
Nuclear/Radiological Incident	Nuclear Incident/Accident – SONGS / Hazmat
Extreme Weather	See Severe Weather: Extreme Heat Severe Weather: Wind Event
Transportation Failure	Transportation Accidents – Rail/Aircraft/Highway
Dam Failure	Dam Failure/Inundation
Aqueduct	See Water System
Tornado	Tornado
Insect Infestation	Insect Infestation
Jail/Prison Event	Jail/Prison Event
Pipeline Disruption	Gas/Fuel Pipeline Disruption
Landslide	Landslide
Hazmat Incident	Hazmat Accidents – Industrial (Hazardous/Radioactive Materials)
Water Supply Disruption/Contamination	Water System
	Sewer System
	Severe Weather: Wind Event

	Severe Weather: Extreme Heat
	Severe Weather: Winter Weather
	Terrorism - Attack Against Agricultural

County twenty-four primary hazard risks: (Rank Order)

1. Earthquake
2. Pandemic Flu
3. Wildland Fire
4. Electrical Failure
5. Emergent Disease/Contamination
6. Cyber Attack
7. Terrorist Event
8. Communications Failure
9. Flood
10. Civil Disorder
11. Climate Change
12. Drought
13. Nuclear/Radiological Incident
14. Extreme Weather
15. Transportation Failure
16. Dam Failure
17. Aqueduct
18. Tornado
19. Insect Infestation
20. Jail/Prison Event
21. Pipeline Disruption
22. Landslide
23. Hazmat Incident
24. Water Supply Disruption/Contamination

City of Riverside twenty-five primary hazard risks: (Rank Order)

1. Earthquake
2. Flooding
3. Drought
4. Terrorism – Humans/Structures
5. Wildland Fire
6. Power Outage/Electrical Failure

7. Severe Weather: Extreme Heat
8. Severe Weather: Wind Event
9. Transportation Accidents – Rail/Aircraft/Highway
10. Water System
11. Hazmat Accidents – Industrial (Hazardous/Radioactive Materials)
12. Cyber Security
13. Gas/Fuel Pipeline Disruption
14. Severe Weather: Winter Weather
15. Communications Outage
16. Sewer System
17. Terrorism - Attack Against Agricultural
18. Pandemic/Disease/Contamination
19. Dam Failure/Inundation
20. Insect Infestation
21. Civil Unrest
22. Landslide
23. Nuclear Incident/Accident - SONGS
24. Tornado
25. Jail/Prison Event

Additional un-ranked hazards that have been identified by the group include:

- Un-reinforced masonry buildings
- Asbestos

3.3 NEW HAZARDS OR CHANGES FROM 2012

The following hazards were added since the approval of the 2012 plan: Cyber Security and Communications Outage. Additionally Tornado was separated out from Severe Wind and Summer/Winter Weather was separated as Extreme Heat and Winter Weather.

Table 3.3.1 City Hazard Chart

HAZARD	SEVERITY AVERAGE	PROBABILITY AVERAGE	RANKING AVERAGE	2012 LHMP Ranking	2017 FINAL RANKING
Earthquake	4	3	1	1	1
Flooding	3	3	3.9	3	2
Drought	3	3	4.6	7	3
Terrorism	3	2	5.8	9	4
Wildland Fire	2	3	6.2	2	5
Power Outage	2	2	7.2	5	6
Severe Weather: Extreme Heat	2	3	8.15	13*	7
Severe Weather: Wind Event	2	3	8.23	15	8
Transportation Accidents – Rail/Aircraft/Highway	2	2	9.7	4	9
Water System	2	2	10.1	10	10
Hazmat Accidents - Industrial	2	3	10.4	6	11
Cyber Security	2	2	10.85	n/a	12
Gas/Fuel Pipeline	2	2	12.9	8	13
Severe Weather: Winter Weather	2	2	13.15	13*	14
Communication Outage	2	2	13.23	n/a	15
Sewer System	2	2	14.5	14	16
Terrorism – Attack Against Agricultural	2	1	15.15	17	17

Pandemic/Disease/Contamination	2	2	15.23	11	18
Dam Failure/Inundation	2	1	15.5	12	19
Insect Infestation	2	2	17	22	20
Civil Unrest	2	2	17.1	16	21
Landslide	1	1	17.4	20	22
Nuclear Accidents - SONGS	2	1	19.2	18	23
Tornado	2	1	19.8	n/a	24
Jail/Prison Event	1	2	20.4	21	25

3.4 BRIEF STATEMENT OF UNIQUE HAZARDS

The City of Riverside faces a diverse array of potential natural and human caused hazards. As with most cities in the Inland Empire, one of the primary concerns is the impact of a large earthquake in the region. Flood risk is a real concern with the Santa Ana River nearby, the large number of dams and reservoirs in and close to the City, the number of canals and arroyos traversing the City, and the low lying areas in the City that are routinely subject to flooding during heavy rains. The City's undeveloped hillsides and the Santa Ana riverbed provide an untapped fuel base for the City's yearly round of wildfires. Additionally, the legal and illegal activities of businesses and members of the community present potential hazards as well. The City's transportation network of roads, freeways, rail lines and airports provide additional associated risks to the City.

3.5 MITIGATION PROJECT UPDATES

Hazard Type	Project Description	Lead Department	Status/Update
Multi-Hazard	Incorporate Updated Local Hazard Mitigation Plan with City of Riverside General Plan	Fire Department - Office of Emergency Management	Ongoing

Earthquake	Evaluation of the city's drinking water system	City of Riverside Public Utilities	Delayed due to lack of funds and higher priority projects. Maintained as a Future Mitigation Action
Earthquake	Retrofit Hunter Substation	City of Riverside Public Utilities	Not Completed with other substation retrofits. Proposed Future Mitigation Action in 2017 plan
Earthquake	Retrofit Mt. View Substation and La Colina Substation	City of Riverside Public Utilities	Completed
Fire	Develop Fire Prevention (High Wind Response) Plan for electric utilities to conform to CPUC's requirements to reduce the threat of fire during high winds.	City of Riverside Public Utilities	Completed January 10, 2012.
Fire	Brush Clearance	City of Riverside Fire, Public Utilities, and Parks	Ongoing
Flood	Freeman Substation 3301 Gibson Street, Riverside, CA 92504	City of Riverside Public Utilities	Project pending funding or inclusion on Capital

	Flood Mitigation-Drainage or levee		Improvement Program Budget
Flood	MONROE MDP - MONROE CHANNEL Replacement of City's existing open channel with underground reinforced concrete box with ten-year storm capacity. Project limits are from California Avenue upstream to Magnolia Avenue.	City of Riverside and Riverside County Flood Control	RFP to be released in January 2013
Flood	SOUTHWEST RIVERSIDE MDP LINES G, G-1 & F-1 From Lincoln Avenue southerly to Victoria Avenue in Meyers Street. Includes Lateral G-1 to Van Buren Boulevard and Lateral F-1 to Harrison Street. City of Riverside to design-build.	City of Riverside	Project to begin 3rd Quarter 2013
Flood	SYCAMORE DAM – OUTLET STRUCTURE MODIFICATIONS	Riverside County Flood Control District	4th Quarter 2013

	Reconstruct outlet structure to prevent blockage by debris accumulation. This is a pilot project to develop a solution for the District's six other Riverside Reservoirs.		
Flood	Challen Park Storm Preparations Installation of straw waddle along California Street hillside to mitigate and reduce runoff onto adjacent sidewalk and street.	City of Riverside Parks, Recreation, Community Services	Completed
Flood	Ryan Bonaminio Park Storm Preparations Native plant area regarded to improve drainage to main storm drain. Adjacent turf area regarded to improve drainage.	City of Riverside Parks, Recreation, Community Services	Completed
Flood	Ameal Moore Nature Center Storm Preparations Native plants installed on slope to help keep soil in place. Sandbags installed	City of Riverside Parks, Recreation, Community Services	Completed

	near structure to protect structure and divert waters.		
Flood	Doty-Trust Park Storm Preparations Install plastic sheeting and sandbagging on slopes to reduce runoff and prevent mudslides into park.	City of Riverside Parks, Recreation, Community Services	Completed
Flood	Mt. Rubidoux Roadway Drainage Improvements Installation of 1200 linear feet of rock berm, 120 hay bales, 30 linear feet of rock gutter concreated in place, construct 15 water bars, install 225 sand bags. Staged 6,000 sandbags for resident use.	City of Riverside Parks, Recreation, Community Services	Projected completion December 31, 2016
Road Improvement	Hidden Valley Wildlife Reserve Improve Entry Rd Arlington Ave to Maint. Sta./Vista Pt. 1.60 miles 0 ft/ 0 ft Const Access road improvements and	City of Riverside.	FY 12/13

	Bike Trail on earthen levee.		
Replace Bridge	Van Buren Blvd Bridges Santa Ana River 0.10 miles 0 ft/ 0 ft Replace existing bridges	City of Riverside and City of Jurupa Valley	FY 12/13
Geology and Soil Erosion	Prior to the approval of the final construction plans, an Erosion Control plan that incorporates Best Management Practices (BMPs) to control erosion and protect water quality shall be approved by the Public Works Department. The BMPS shall be implemented by the construction contractor throughout the construction period.	City of Riverside Public Works Department	Completed in 2013
Multi-Hazard	Video surveillance and access control project. Substation physical security project at all RPU	City of Riverside Public Utilities	Completed June 23, 2016

	critical electric infrastructure sites.		

SECTION 4.0 - HAZARD IDENTIFICATION AND RISK ASSESSMENT

4.1 CRITICAL FACILITIES AND INFRASTRUCTURES

Critical Facilities Type	Number
Airports	1
Communications Centers	3
Detention Centers	3
Emergency Command Centers	2
Police Stations	6
Fire Stations	14
Primary Care Hospitals	3
Federal Law Enforcement/Court Facilities	9
Maintenance Yards	2
Schools and Day Care Facilities	121
+Public Utilities—Water Facilities	33
+Public Utilities—Electric Facilities	19
Water Treatment Plants	2
Dams/Reservoirs	11
Primary City Buildings	13
Primary County Buildings	30
Courts	4
Community Centers (shelters)	15
Non-Governmental Buildings	25
Totals	316

4.2 ESTIMATING POTENTIAL LOSS

Please refer to Riverside County Operational Area MJHMP Section 4.5 for the property loss value for the City of Riverside.

4.3 TABLE REPLACEMENT VALUES

The listed critical facilities have been identified as Law Enforcement Sensitive locations and under DHS guidance, their exact locations (addresses) and other vital information are restricted.

Schools and hospitals are considered critical facilities, but are not listed in this table.

Facilities listed are exposed to multiple hazards.

Name of Asset	Building Value ($)	Contents Value ($)
Airport Terminal	$4,824,777.00	$252,649.00
Amtrak @@	$0.00	
Amtrak - Metrolink Station @@	$0.00	
Arlington Lib	$516,092.00	$2,058,284.00
Army Well 1	$0.00	
Army Well 3	$0.00	
AT&T Regional Control Center @@	$0.00	
AT&T Switching Facility @@	$0.00	
AT&T Telephone @@	$0.00	
Bobby Bonds Park Community Center	$13,161,400.00	$376,040.00
Bordwell Park – Stratton Community Center	$4,792,750.00	$100,900.00
Bryant Park – Arlanza Community Center	$10,089,500.00	$237,400.00
California Tower ***	$0.00	
Casa Blanca Branch Lib	$3,217,059.00	$2,093,264.00
Cesar Chavez Community Center	$3,595,564.00	
CHP ***	$0.00	
City Utility - Water Booster Station	$61,109.00	$151,668.00
City Utility - Water Booster Station	$45,318.00	$120,574.00
City Utility - Water Buchanan #2 Well	$28,530.00	$115,016.00
City Utility - Water Cook Booster Station	$13,986.00	$243,426.00
City Utility - Water Country Club Booster	$97,324.00	$96,185.00
City Utility - Water Crest Booster Station	$44,635.00	$75,836.00
City Utility - Water Cunningham Well	$12,482.00	$77,098.00
City Utility - Water Electric Well	$18,916.00	$104,145.00
City Utility - Water Booster Station	$67,228.00	$278,826.00
City Utility - Water Field Booster Station	$6,994.00	$78,490.00
City Utility - Water Fill Well	$13,986.00	$77,098.00
City Utility - Water Frances Mary Booster Station	$178,329.00	$165,571.00
City Utility - Water Grand Terrace Booster Station	$229,230.00	$400,342.00
City Utility - Water Iowa Booster Station	$173,791.00	$657,228.00
City Utility - Water Lemon Booster Station 1	$78,133.00	$240,139.00
City Utility - Water Lemon Booster Station 2	$202,353.00	$671,130.00
City Utility - Water Mockingbird Booster Station	$188,904.00	$470,173.00

City Utility - Water Mockingbird Canyon Valve Station	$41,533.00	$470,173.00
City Utility - Water Mulberry Booster Station	$189,206.00	$207,279.00
City Utility - Water Olivewood #2 Booster Station	$52,876.00	$262,892.00
City Utility - Water Public Works Department	$224,704.00	$0.00
City Utility - Water Ross Booster Station	$8,160.00	$171,853.00
City Utility - Water Springs Well	$56,056.00	$94,792.00
City Utility - Water Sugarloaf Booster	$110,779.00	$155,459.00
City Utility - Water Tilden Booster Station	$152,636.00	$503,030.00
City Utility - Water University City Booster	$116,667.00	$355,156.00
City Utility - Water Victoria Booster	$157,167.00	$610,467.00
City Utility - Water Well 1	$11,774.00	$70,519.00
City Utility - Water Well 2	$13,434.00	$70,519.00
City Utility - Water Well B	$29,791.00	$115,016.00
City Utility - Water Well Bldg.	$113,511.00	$98,730.00
City Utility - Water Well C	$20,357.00	$87,879.00
CHA Warehouse **		
Corona Citrus Packing House @@	$0.00	
Corp Yard	$3,021,011.00	$1,863,144.00
Dales Senior Center	$5,106,250.00	$107,500.00
DEA #	$0.00	
DMV ***	$0.00	
DMV ***	$0.00	
DMV ***	$0.00	
Electric New Substation Bldg.	$161,048.00	$7,437,321.00
Electric - Plaza Bldgs. 1 & 2 Substation	$62,154.00	$5,544,023.00
Electric Casa Blanca Substation	$0	$9,224,828.00
Electric Central Substations	$16,491.00	$2,007,131.00
Electric Freeman Bldgs. 1-4 Substation	$271,267.00	$15,164,297.00
Electric Harvey Lynn Bldgs. 1-3 Substation	$94,903.00	$12,018,444.00
Electric Hunter Bldgs. 1-4 Substation	$125,130.00	$7,537,481.00
Electric Kaiser Substation	$0	$819,012.00
Electric La Colina Bldgs. 1-3 Substation	$157,463.00	$20,513,896.00
Electric Maintenance Bldg. Substation	$680,743.00	$391,662.00
Electric Mt. View Bldgs. 1-3 Substation	$183,163.00	$11,055,352.00
Electric Orangecrest Substation	$0	$2,455,759.00
Electric Sherman Substation	$133,569.00	
Electric Springs Co - Generation Plant	$25,562,000.00	$23,890,006.00
Electric Springs Substation	$5,050,217.00	$0

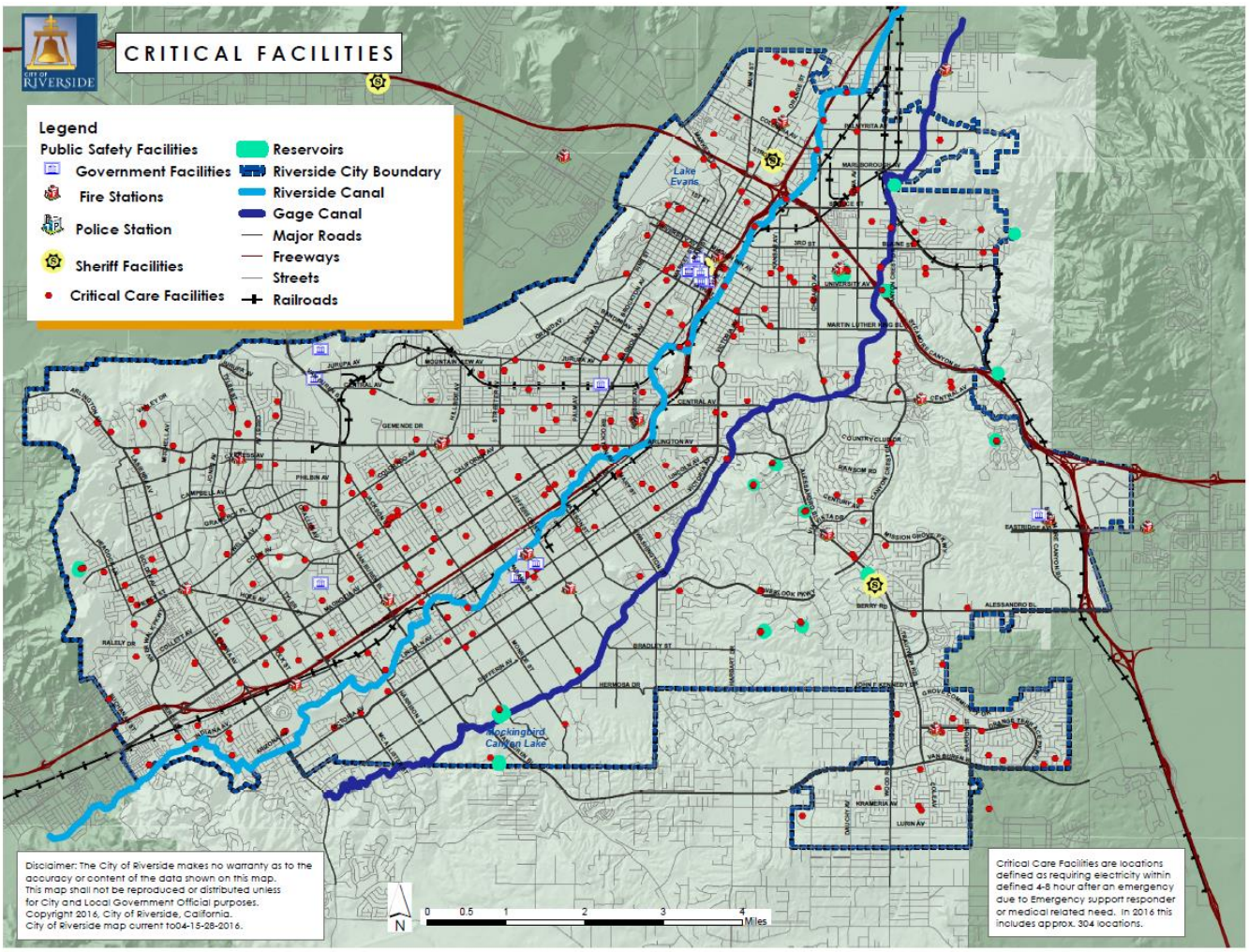
Electric Substation 1	$1,001,773.00	$7,934,136.00
Electric Substation 2	$464,850.00	$0.00
Electric University Substation	$0	$5,935,281.00
Eric M. Solander Center	$0.00	
Federal Public Defender #	$0.00	
Fire Dept Classroom Training	$29,580.00	$0.00
Fire Headquarters	$10,536,412.00	$577,106.00
Janet Goeske Senior Center	$10,177,200.00	$254,430.00
Hunt Park – Renck Community Center		
Nichols Park – Joyce Jackson Community Center	$4,300,000.00	$86,000.00
La Sierra Branch Lib	$1,967,644.00	$2,183,974.00
La Sierra Park Community Center	$4,602,500.00	$92,050.00
La Sierra Park – La Sierra Senior Center		
Reid Park – Ruth Lewis Community Center	$4,300,000.00	$86,000.00
Lincoln Park Community Center	$1,050,000.00	$20,000.00
Main Library	$11,103,137.00	$15,271,835.00
Marcy Library	$1,967,881.00	$2,698,542.00
Metro Water District	$0.00	
Metrolink @	$0.00	
Metrolink @	$0.00	
Orange Square Office Facility	$20,913,726.00	$2,068,613.00
Orange Terrace Park – Orange Terrace Library		
Orange Terrace Park – Orange Terrace Community Center		
Pepsi Bottling Co. @@	$0.00	
Pierce St Lift Stn# 15	$0.00	
Police Dept Headquarters	$9,486,105.00	$1,678,967.00
Police Dept Helicopter Hangar	$2,748,715.00	$713,758.00
Police Dept Patrol Building	$6,298,811.00	$1,119,752.00
Primary EOC	$8,807,698.00	$1,088,743.00
Public Utilities Main Offices	$18,601,104.00	
Ralph's Distribution Center @@	$0.00	
RFD# 1	See Headquarters	
RFD# 10	$587,179.00	$103,010.00
RFD# 11	$1,409,232	$177,709.00
RFD# 12	$2,738,152.00	$394,335.00
RFD# 13	$3,992,823.00	$217,748.00
RFD# 14	$4,227,694.00	$217,748.00
RFD# 2	$2,935,899.00	$250,382.00
RFD# 3	$2,935,899	$351,240.00
RFD# 4	$1,409,232.00	$144,588.00

RFD# 5	$2,818,464.00	$100,733.00
RFD# 6	$2,935,899.00	$98,585.00
RFD# 7	$1,409,232.00	$129,298.00
RFD# 8	$1,409,232	$189,455.00
RFD# 9	$1,409,232.00	$140,672.00
Riverside City Hall	$31,788,330.00	$4,121,965.00
Riverside Co. ** Admin Center - Main Bldg.	$0.00	
Riverside Co. ** Admin Center - Tower	$0.00	
Riverside Co. ** Health Service	$0.00	
Riverside Co. ** Jail	$0.00	
Riverside Co. ** Jail & Probation	$0.00	
Riverside Co. ** Public Defender	$0.00	
Riverside Co. ** Public Soc Services	$0.00	
Riverside Co. ** Animal Control	$0.00	
Riverside Co. ** Child Protective Services Admin	$0.00	
Riverside Co. ** Co Clerk	$0.00	
Riverside Co. ** Coroner's Office	$0.00	
Riverside Co. ** Courthouse East Wing	$0.00	
Riverside Co. ** Courthouse West Wing	$0.00	
Riverside Co. ** DA's Office	$0.00	
Riverside Co. ** DPSS	$0.00	
Riverside Co. ** Facilities	$0.00	
Riverside Co. ** Family Law	$0.00	
Riverside Co. ** Flood Control	$0.00	
Riverside Co. ** Hall Of Justice	$0.00	
Riverside Co. ** Health	$0.00	
Riverside Co. ** Juvenile Court	$0.00	
Riverside Co. ** Law Lib	$0.00	
Riverside Co. ** Mental Health	$0.00	
Riverside Co. ** Mental Health	$0.00	
Riverside Co. ** Mental Health	$0.00	
Riverside Co. ** Mental Health	$0.00	
Riverside Co. ** Probation	$0.00	
Riverside Co. ** Public Health	$0.00	
Riverside Co. ** Purchasing	$0.00	
Riverside Co. ** Roads Dept	$0.00	
Riverside Co. ** Transportation Dept	$0.00	
Riverside Co. ** Workforce Training Center	$0.00	
Riverside Co. Public Works **	$0.00	
Riverside Convention Center	$43,904,053.00	$2,766,895.00
Riverside Public Utilities Building	$4,860,480.00	

Villegas Park – Villegas Community Center		

**	Riverside County Facilities
***	State Facilities
#	Federal Facilities
@@	Private Industry

Figure 4.3.1 Critical Facilities



4.4 IDENTIFICATION OF RISKS AND VULNERABILITIES

Earthquake - Severity – 4, Probability – 3, Rank 1

The Alquist-Priolo Earthquake Fault Zoning Act requires the State Geologist to identify earthquake fault zones along traces of both recently and potentially active major faults. Although there are no such zones within the City or its Sphere of Influence, earthquakes are still of a major concern with the close proximity of major fault zones to the City. See Figure 4.4.1 Fault Zone Map and Figure 4.4.2 Fault Map Riverside County.

For planning purposes, the City of Riverside uses FEMA's HAZUS software for determining the types of damages and impacts of various earthquakes. For the LHMP process, the City has selected a scenario of a 7.8M earthquake on the San Andreas Fault with an epicenter in the Salton Sea region. This scenario has been used by Cal-OES for planning purposes and provides the highest potential for damage to the City based on the capabilities of all of the earthquakes in the area.

A major earthquake occurring in or near the City may cause deaths and casualties, extensive property damage, fires and hazardous material spills and other ensuing hazards. The effects could be aggravated by aftershocks and by the secondary effects of fire, hazardous material/chemical accidents and possible failure of the waterways and dams. The time of day and season of the year would have a profound effect on the number of dead and injured and the amount of property damage sustained. Extensive search and rescue operations would be required to assist trapped or injured persons. Emergency medical care, food and temporary shelter could be required by injured or displaced persons. Identification and burial of many dead persons would pose difficult problems; public health would be a major concern. Mass evacuation may be essential to save lives, particularly in areas downwind from hazardous material releases. Many families would be separated particularly if the earthquake should occur during working hours, and a personal inquiry or locator system could be essential to maintain morale. Emergency operations could be seriously hampered by the loss of communications and damage to transportation routes within, and to and from, the disaster area and by the disruption of public utilities and services.

(See Figure 4.4.1 Fault Zone Map and Figure 4.3.1 Critical Facilities.)

The economic impact on the City of Riverside from a major earthquake would be considerable in terms of loss of employment and loss of tax base. Also, a major earthquake could cause serious damage and/or outage of computer facilities. The

loss of such facilities could curtail or seriously disrupt the operations of banks, insurance companies and other elements of the financial community. In turn, this could affect the ability of local government, business and the population to make payments and purchases.

Although there are a number of faults within a 50 mile range of the City, the fault zones listed below are seen as primary faults to the City.

The **San Andreas Fault** lays to the east of the City and at its closest point is eleven miles from Downtown Riverside, abutting the San Bernardino Mountains. The San Andreas Fault is estimated to have the capability of producing up to an 8.3 magnitude (M) earthquake.

The **San Jacinto Fault** also lays to the east of the City and at its closest point, is seven miles from Downtown. This fault passes through the intersection of Interstates 10 and 215, the City of Loma Linda and the Box Springs Mountains. This fault has the capability of producing up to a 7.0M earthquake.

The **Elsinore Fault** passes within thirteen miles of Downtown, extending approximately four miles west of Lake Mathews and Corona and south into the city of Lake Elsinore. This northwest-southwest trending fault has the capability of producing up to a 6.0M earthquake.

The **Chino and Whittier Faults** are the two upper branches of the Elsinore Fault Zone. Northwest of Corona (Glen Ivy area), the Elsinore fault splits into two segments: the southwestern strand becoming the 40 km long Whittier Fault (probable magnitudes between 6.0 and 7.2) and the northeastern strand becoming the 21 km long Chino Fault (probable magnitudes between 6.0 and 7.0).

The **Chino-Central Avenue Fault** is located in the western portion of the Valley Region and is within an Alquist-Priolo Zone indicating that movement within the past 11,000 years is suspected. The Chino-Central Avenue fault is a southwest dipping, reverse-right lateral oblique slip fault that splays off from the Elsinore fault in the Corona area and continues to the Chino area for a total length of about 17 miles (28 kilometers). The Chino-Central Avenue fault is considered capable of generating a magnitude 6.7 earthquake.

(See Riverside County OA MJHMP Section 5.3.1).

Figure 4.4.1 Fault Zone Map City of Riverside

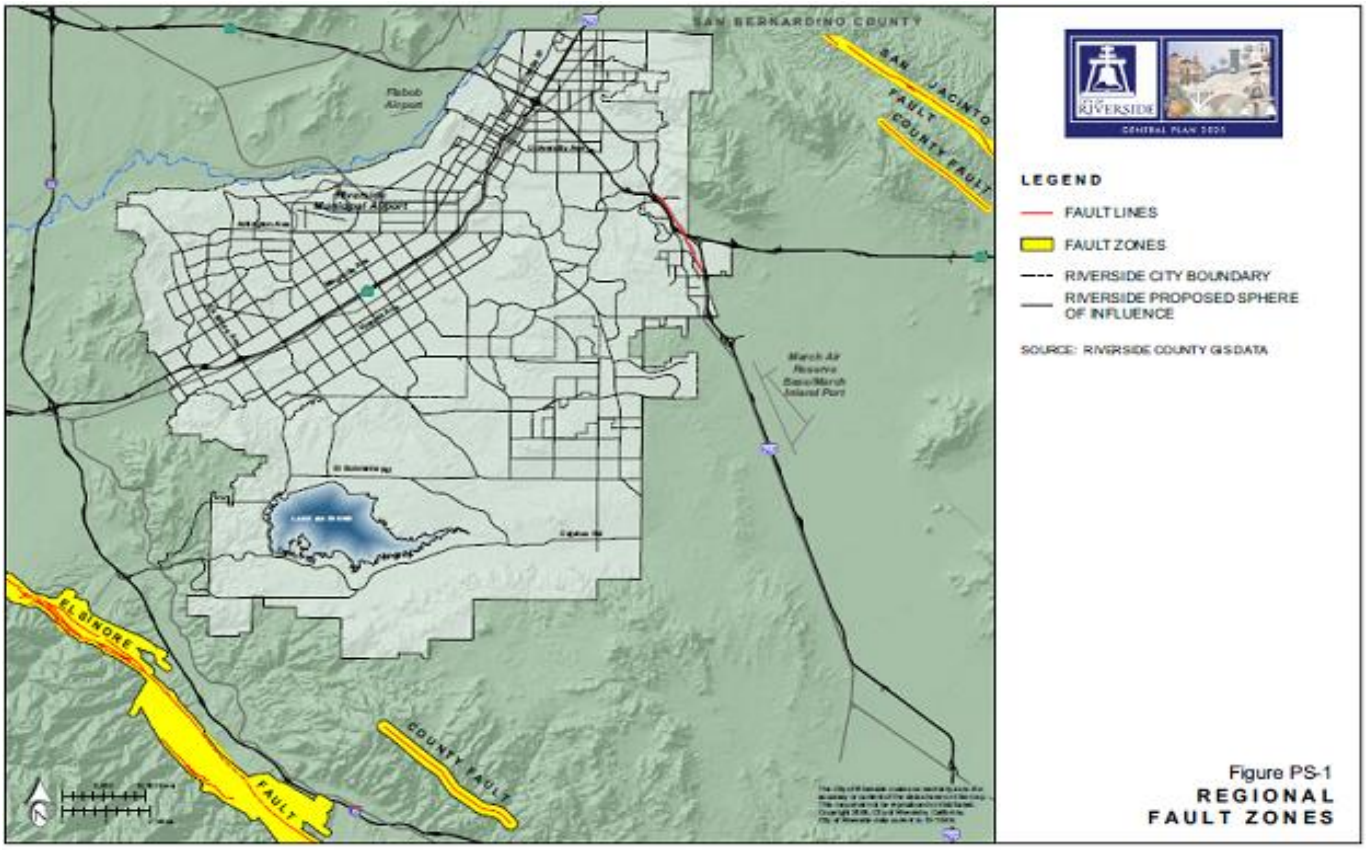
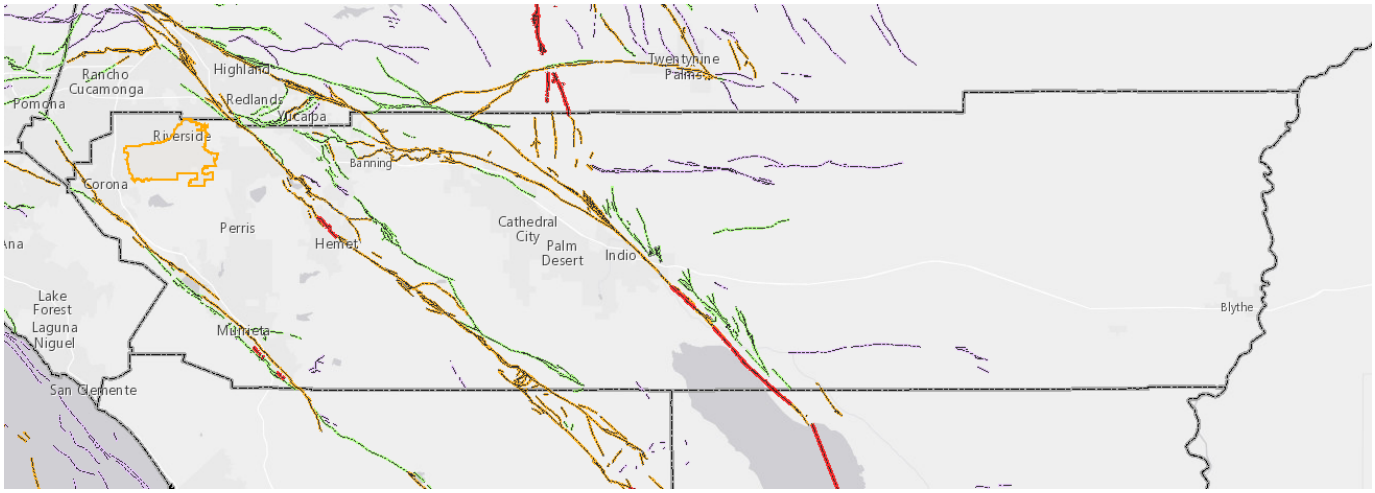


Figure 4.4.2 Fault Map – Riverside County



Flood – Severity – 3, Probability – 3, Rank 2

The City has been involved in five Presidential Declarations in the last eleven years for flooding events. Flooding represents a potential hazard to citizens and property within the City. Flood hazards may be considered in two categories:

- Natural flooding from heavy rains
- Dam, reservoir or water tank failure.

While the majority of the area potentially subject to flooding is located along the Santa Ana River area, local topography and the presence of a number of large aboveground water storage tanks, increase the potential for flood events in other portions of the City. However, there are no NFIP insured repetitive loss areas. The principal types of flood hazards in the City include stream flooding, bridge scour, dam inundation and earthquake-induced flooding (seiches). The City is potentially vulnerable to flooding associated with the Santa Ana River and other small-scale floods originating from the hillsides in the City, local dams, and canals. While not likely to occur in the City, bridge foundations are vulnerable to scouring during a flood.

There are several portions of the City of Riverside that are prone to urban flooding due to debris accumulation in storm drains and in flood control channels and basins, overburdened sewage pumping stations, and aged drainage systems. Low-lying areas of the City are particularly susceptible to regular flooding. Over the past several years, the City has had heavy flooding as a result of heavy rains.

The flood hazard areas of the City are subject to periodic flooding that can adversely affect the public health, safety, and general welfare. Contamination due to flooded sewage systems poses the greatest risk to health and safety of persons in the affected areas. The heavy rains will overtax the sewer system, causing a backup. Many times, this will cause sewage to flow up from manhole covers onto the streets.

Additionally, there is a high probability that there will be some underground facilities (transformers and switches) impacted by the high volume of water. Potentially this will cause power outages, electrical shorts and fires in some underground vaults, as well as potentially severe damage to the electric supply equipment.

See Figures 4.4.3 through 4.4.4 for 100 - 500 year flood maps.

Repetitive flooding areas

In many cases, the flooding has caused repetitive damage. These repetitive areas include:

- 14th Street and Highway 91
- Arlington Avenue and the railroad tracks
- Van Buren Avenue and Indiana Avenue
- Fairmount Park
- Lake Evans
- Downtown Area
- Don Derr Park
- University Avenue at the railroad tracks

(See Riverside County OA MJHMP Section 5.3.9)

Figure 4.4.3 – 100 and 500 Year FEMA Flood Zone Map – City of Riverside

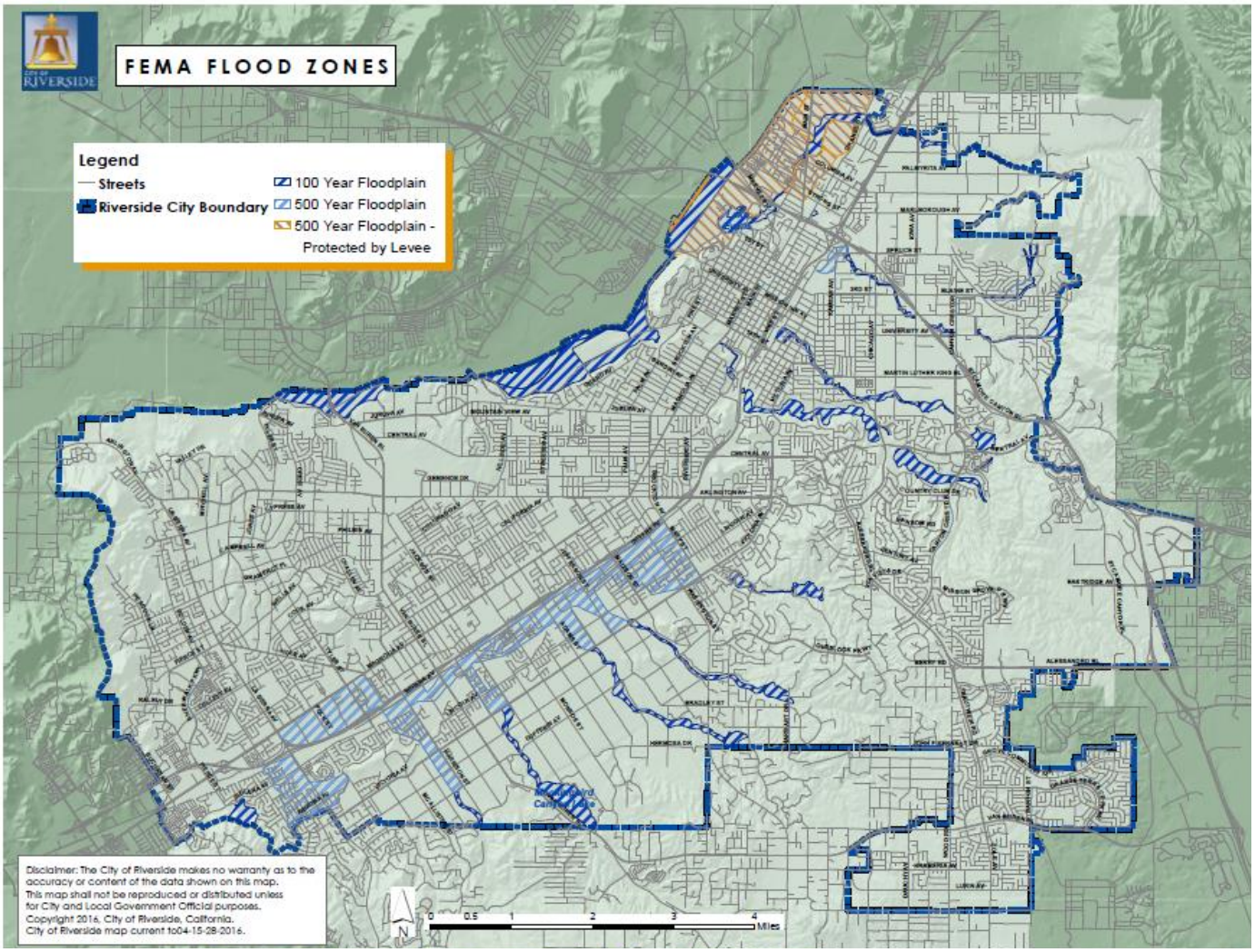


Figure 4.4.4 Flood Zones - Licensed Health Care Facilities

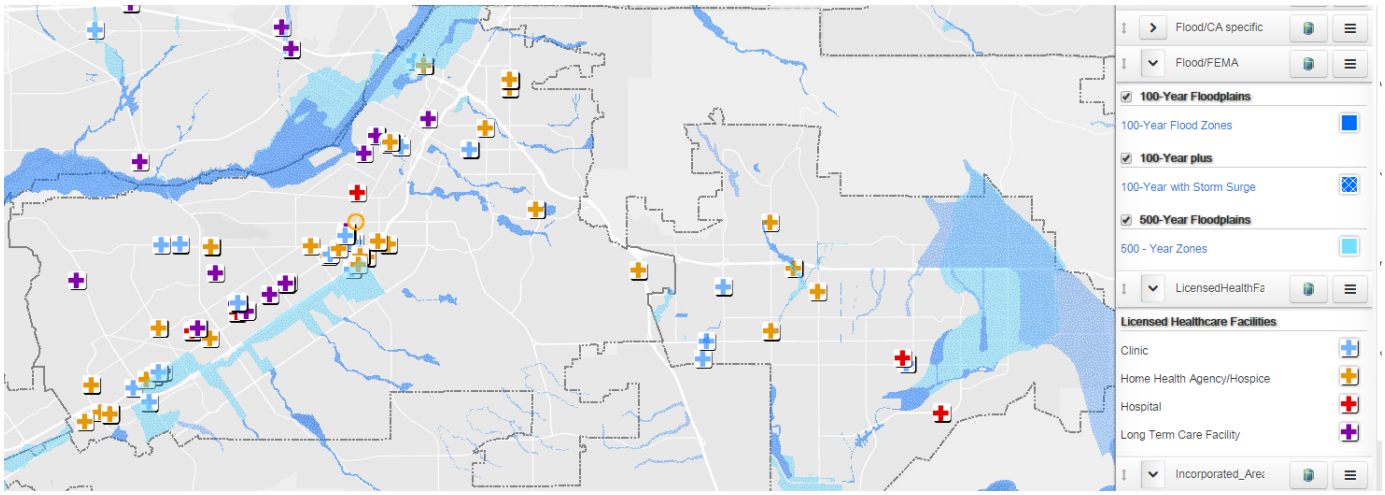


Figure 4.4.5 Extreme Weather Hazards

Hazard	Severity	Probability	Ranking
Drought	3	3	3
Extreme Heat	2	3	7
Wind Event	2	3	8
Winter Weather	2	2	14
Tornado	2	1	24

Drought - Severity – 3, Probability – 3, Rank 3

A drought is a period of dry weather: a long period of extremely dry weather when there is not enough rain for the successful growing of crops or the replenishment of water supplies.

Drought is a gradual phenomenon. Normally, one dry year does not constitute a drought in California, but rather serves as a reminder of the need to plan for droughts. California's extensive system of water supply infrastructure (reservoirs, groundwater basins, and interregional conveyance facilities) generally mitigates the effects of short term dry periods for most water users. (SHMP)

Drought can have secondary impacts. For example, drought is a major determinant of wildfire hazard, in that it creates greater propensity for fire starts and larger, more prolonged conflagrations fueled by excessively dry vegetation, along with reduced water supply for firefighting purposes. Drought is also an economic hazard. Significant economic impacts on California's agriculture industry can occur as a result of short and long term drought conditions; these include hardships to farmers, farm workers, packers, and shippers of agricultural products.

In some cases, droughts can also cause significant increases in food prices to the consumer due to shortages.

Past experience with California droughts tells us that drought impacts are felt first by those most dependent on or affected by annual rainfall – agencies fighting forest fires, ranchers engaged in dryland grazing, rural residents relying on wells in low yield rock formations, or small water systems lacking a reliable water source.

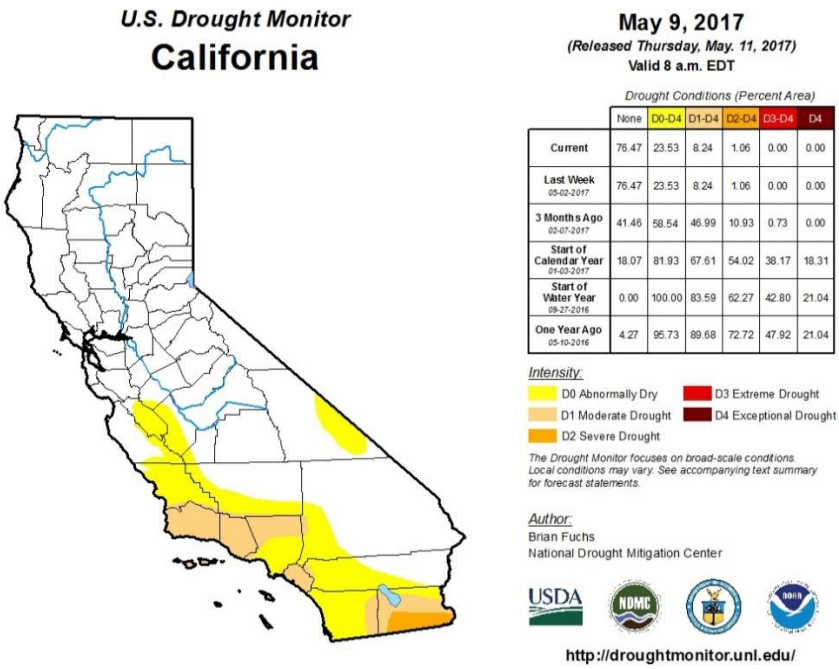
Drought Risk Assessment

The Department of Water Resources produces a California Water Plan every five years that not only includes a statewide water budget but also regional watershed water budgets. These water budgets are based on California Department of Finance population projections, and indicate clearly that demand for water will exceed supply in 2020 whether or not a drought condition exists at that time. Most of the State's regions, except for the North Coast and San Francisco Bay Regions, experience average-year and drought- year shortages now, and are forecasted to experience increased shortages in 2020. The largest average- year shortages are forecasted for the South Coast Region, which heavily relies on imported water. Future average-year shortages in the South Coast Region reflect forecasted population growth plus lower Colorado River supplies as California reduces its use of Colorado River water to the State's basic apportionment.

Although a drought in and of itself is not a direct threat to property and life, the impact on the agricultural industry and home development can be monumental. The costs to Riverside County for the current drought in terms of fire damage and forest management have been in the millions. This is a chronic problem for Riverside County and accounts for significant indirect costs, loss of property and threat to human life.

Climate scientists studying California find that drought conditions are likely to become more frequent and persistent over the 21st century due to climate change. The experiences of California during recent years underscore the need to examine more closely the state's water storage, distribution, management, conservation, and use policies.

Figure 4.4.5 U.S. Drought Monitor – California



	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	76.47	23.53	8.24	1.06	0.00	0.00
Last Week 05-02-2017	76.47	23.53	8.24	1.06	0.00	0.00
3 Months Ago 02-07-2017	41.46	58.54	46.99	10.93	0.73	0.00
Start of Calendar Year 01-03-2017	18.07	81.93	67.61	54.02	38.17	18.31
Start of Water Year 09-27-2016	0.00	100.00	83.59	62.27	42.80	21.04
One Year Ago 05-10-2016	4.27	95.73	89.68	72.72	47.92	21.04

(See Riverside County OA MJHMP Section 5.3.11).

Severe Weather: Extreme Heat - Severity – 2, Probability – 3, Rank 7

Extreme heat can be described as overly hot temperatures that are sustained to the extent that human and animal overexposure can cause heat illness and death. Heat illness is a major cause of preventable morbidity in regions characterized by high ambient temperatures.

(See Riverside County OA MJHMP Section 5.3.13.1).

Severe Weather: Wind Event - Severity – 2, Probability – 3, Rank 8

Santa Ana Winds have caused large amounts of damage and increased the fire damage level dramatically. The history table for Wind Events shows the high number of events that are directly attributed to Santa Ana Winds.

(See Riverside County OA MJHMP Section 5.3.13.3).

Severe Weather: Winter Weather - Severity – 2, Probability – 2, Rank 14

Sustained temperatures below freezing in California's generally mild weather regions can cause life loss and health risks to vulnerable populations. Although infrequent, freezes can severely affect California agriculture. Freezing temperatures occurring during winter and spring growing seasons can cause extensive crop damage. (SHMP).

(See Riverside County OA MJHMP Section 5.3.13.2).

Tornado - Severity – 2, Probability – 1, Rank 24

The area around the intersection of the 60 Freeway and the 215 Freeway has been the location in the City where two separate tornados events (rated F1) and a funnel cloud have occurred. In the May 22, 2008 incident, two tornados were observed together in the same area.

(See Riverside County OA MJHMP Section 5.3.17).

Terrorism – Severity – 3, Probability – 2, Rank 4

Terrorism – Attack Against Agricultural - Severity – 2, Probability – 1, Rank 17

In 2012 a suspect in a terror case involved a Riverside resident who was tried and convicted at Riverside Federal Court of material support to terrorism. In 2013 "domestic terror" suspect Christopher Dorner shot and killed two law enforcement officers including Riverside Police Department Officer Michal Crain, and wounded two others including a Riverside officer. A Riverside resident was charged with material support to terrorism in connection with the December 2, 2015 terror attacks and accused of plotting to carry out attacks in 2011 and 2012. As with most cities in California, Riverside has its vulnerabilities from both international and domestic U.S. terrorist groups and "lone wolf" individuals. Located in the City are numerous locations which are part of the City's Critical Infrastructure List that could be sites of potential terrorism. These sites include the numerous local, state and federal buildings, local

dams/reservoirs, research facilities, agricultural sites, and public assembly sites. As the County Seat, there are a large number of locations that could be a target for a localized individual terrorist attack.

(See Riverside County OA MJHMP Section 5.3.7).

Wildland Fire - Severity –2, Probability –3, Rank 5

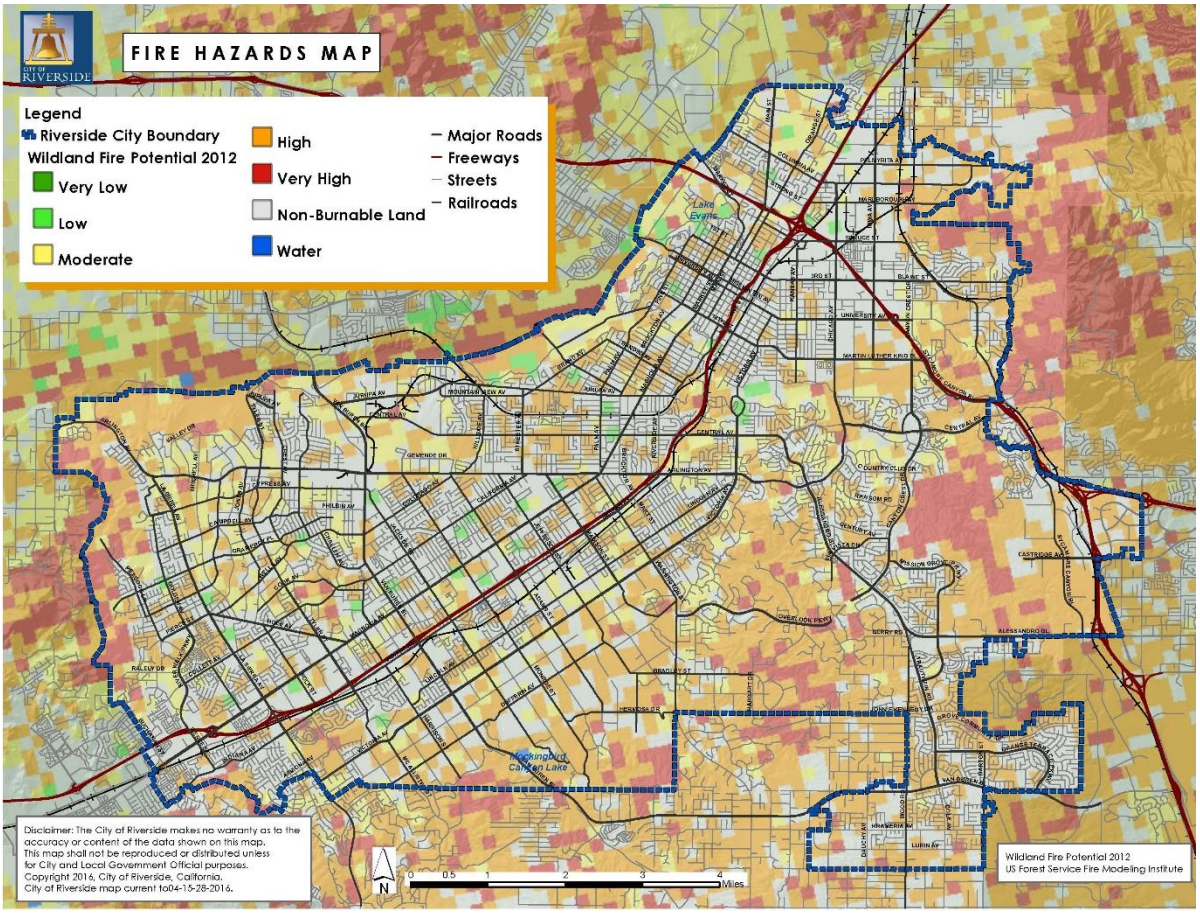
The City of Riverside has had twenty-two (twenty acres or more) wildland type fires in the last ten years and numerous smaller wildland fires. California law requires that periodic assessments and strategic plans be developed to inform policy decisions on the state's forest and rangeland resources (Cal Fire is mandated by Public Resource Code 4789). The City of Riverside participated in the assessment process for the City and its Sphere of Influence and the attached map has been approved by Cal Fire and the City. As shown on the map, the City has three distinct areas where the threat of wildland fires exists. See Figure 4.4.6 Fire Hazard Map.

The Santa Ana River corridor is made up of a large amount of lush, natural vegetation within the watercourse and its immediate surroundings. The threat of fire in the riverbed is high from both natural causes and human created causes. Many of the fires in the riverbed have been associated with the various encampments that exist within the foliage areas.

This area within the City exists where the urban and suburban developments have come together against open expanses of wildland areas. This type of interface can be found in the City in the areas of UCR, Sycamore Canyon/Canyon Crest, Norco Hills, and the regional nature parks.

The City rests in a valley surrounded on three sides by foothill areas that fall under this category. Typically these areas are mostly covered with scrub brush and small trees. Firefighting efforts in these areas are hampered by limited fire apparatus access and a limited supply of water. Areas that fall in this category are Mt. Rubidoux, Woodcrest, Lake Hills/Mockingbird Canyon/Monroe Hills/La Sierra/Norco Hills areas, and Box Springs Mountain.

Figure 4.4.6 Fire Hazard Map



(See Riverside County OA MJHMP Section 5.3.3)

Power Outage - Severity – 2, Probability – 3, Rank 6

The City of Riverside operates its own electric utility service and distributes electricity to more than 105,000 residential, commercial, and industrial customers. The City has one primary electricity source into the City's power grid. The loss of this primary electrical source completely isolates the City from any outside power supply. As a backup to this single supply source, the City has two cogeneration facilities capable of supplying enough power to support 40% of the City's power needs. These two facilities are connected to the City's power grid and provide power to the City's identified critical facilities.

In October, 2007, there was a failure of the primary power source, causing a complete loss of power to all customers in the service area. As the cogeneration facilities did come on-line as quickly as anticipated, power was slower to return than anticipated. This outage lasted approximately 6 hours.

The City is a member of Cal-ISO, which controls 75 percent of the California's Power Grid. Cal-ISO controls the flow of power and identifies when there is the need for power providers to reduce their usage. Should there be a notice from Cal-ISO to the City to reduce usage, the City would reduce usage by using the cogeneration plants to supplement power usage, or if necessary, begin the process of interrupting service on a rotating black-out basis. Power will be turned off in portions of the utility's service area for approximately a half hour and then will be restored—at which time the power will be turned off in another portion of the grid. This rotation will continue until the service can be restored to full capacity.

The City's above ground power lines are susceptible to the high winds that pass through the City. The potential for arcing lines causing sparks to drop onto buildings or brush is a hazard that the utility department continues to address. Traffic accidents where a pole is struck by a vehicle is an on-going occurrence in the City, however there have been few major fires caused by this type of event.

In addition to the overhead lines, there is a potential for events relating to underground vaults and power lines. These vaults and lines are susceptible to flooding during heavy rains as well as being broken by contractors digging in the streets and on property where underground utilities are used.

(See Riverside County OA MJHMP Section 5.3.4)

Transportation Incidents Rail/Aircraft/Highway - Severity – 2, Probability – 2, Rank 9

The City's multi-faceted transportation network contains major freeways, rail lines, aircraft routes, and airports.

Highway Transportation

The road systems include the 60 Freeway on the north, the 91 Freeway through the center of the City, and the 215 Freeway along the east. The 91 Freeway ranks as one of the busiest in California. The following data was developed in 2006 (most recently known study) by CalFire when they performed their Highway Hazardous Materials Study.

Examples of predicted increases between now and 2020

4.1 SR-91 at the Orange County Line-a 95% increase over the current daily traffic volume

4.2 SR-60/I-215 in Box Springs-a 60% increase to about 300,000 vehicles per day-this is about 30% more than SR-91 carries today into Orange County

4.3 I-215 near March Air Reserve Base-a 100% increase

(See figure 4.4.7 for a map of transportation corridors in and adjacent to the City of Riverside).

One of the primary study sites in the County used by CalFire in their Hazardous Materials Study (2006) was the 60 Freeway at the Orange Street Overpass in Riverside (only site in the City). Of the study sites, this site had the highest number of commercial trucks (16 per hour) displaying hazardous materials placards. Of those, 63 percent of the bulk hazardous loads were flammable liquids and 2 percent were toxic and/or corrosive substances. In addition to these placarded trucks, there are numerous smaller delivery trucks that carry hazardous materials under the amount that requires placarding.

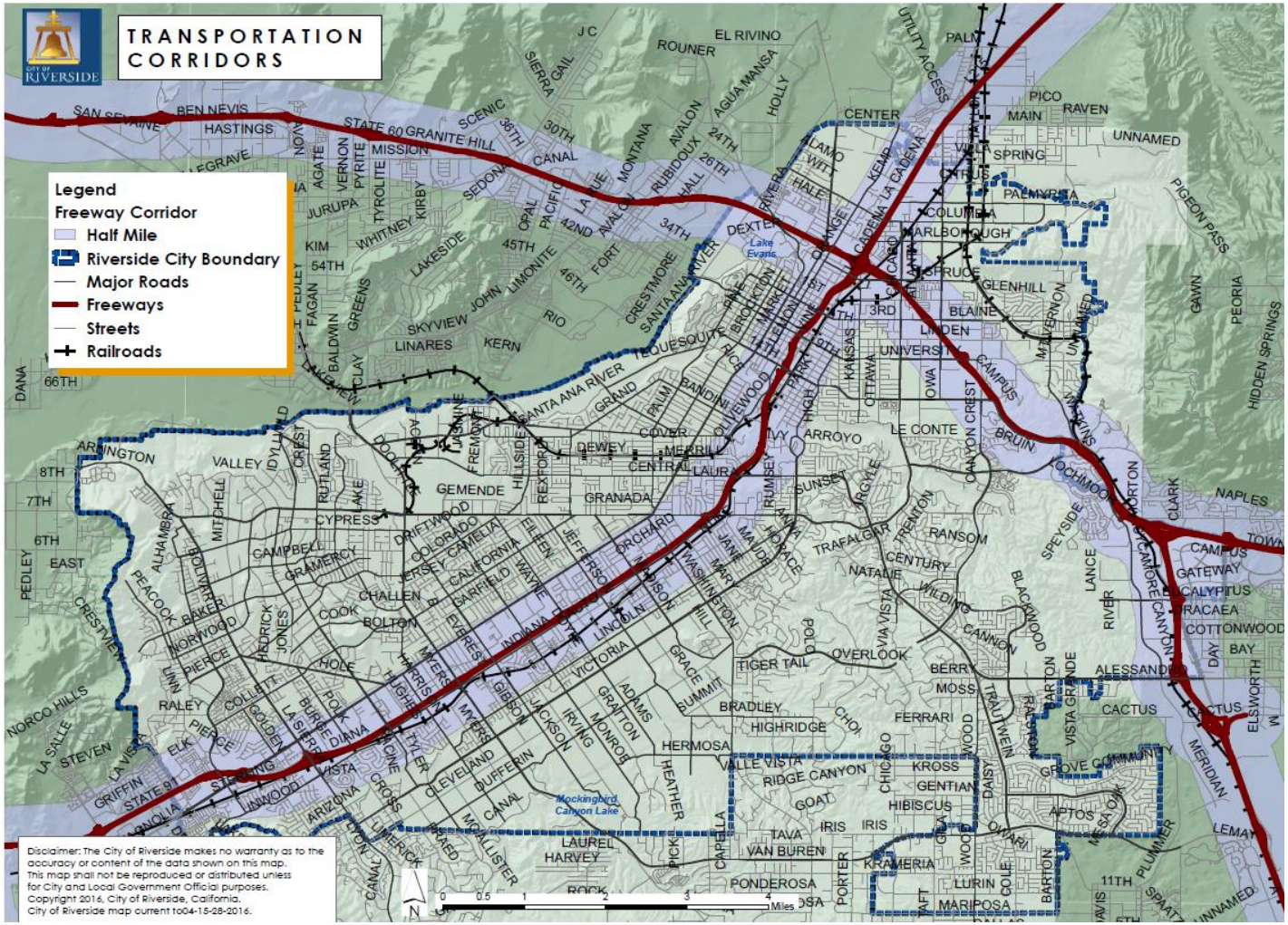
Additional information shows those existing freeway traffic volumes within the City range from 101,000-125,000 vehicles per day on SR 60, 160,000-197,000 vehicles per day on SR-91, and 151,000-173,000 vehicles per day on I-215.

In addition to the freeways, there are several heavily traveled north-south and east-west connector roadways in the City.

Kaiser Hospital, St. Francis de Sales School, and Sherman Indian High School are located in close proximity to the 91 Freeway.

(See Riverside County OA MJHMP Section 5.3.14)

Figure 4.4.7 Ground Transportation Corridors – City of Riverside



Rail Service

The primary hazard with rail service has not been any train vs. train or track derailments. There continues to be a large number of train v. vehicle or train v. pedestrian accidents in the City. These accidents have caused both traffic and rail service delays of up to 6 hours, but has not caused any major derailments. The danger with these types of accidents is that they can create train derailments or accidents when the train impacts with a vehicle or when the train engineer attempts to stop the train quickly.

The City of Riverside is served by two main line freight railroads, operating along 17 miles of railroad corridors within the City. The two rail services in the region follow the 91 and 215 Freeways with both passenger and freight service. There are 26 mainline crossings where the railroads intersect with City streets and approximately 128 trains (100 cars per train) pass through the City each day. The Union Pacific (UP) line is the main line from the Pacific Coast to Texas and the Midwest. The Burlington Northern Santa Fe (BNSF) line is the life blood route to the Ports of Los Angeles and Long Beach, and to all parts east. A third system, Metrolink, provides commuters a direct route to Los Angeles, Orange and San Bernardino Counties as well as stops in Riverside County. Amtrak, a national rail service, passes through the City, en route between Chicago and Los Angeles, using the BNSF route, twice per day. Both of these rail lines are major arteries to the Los Angeles and Long Beach ports. The bulk of the port traffic comes through the Riverside area. Any type of interruption to service would cripple the railroads. In addition to the main line tracks, a variety of railroad spurs and industry tracks are throughout the City. Also, the Riverside Branch line of Union Pacific from downtown Riverside to the Hunter Park area connects with the San Jacinto Branch line near Marlborough, running near the base of Box Springs Mountain.

Figure 4.4.8 Railroads - Schools and Care Facilities – City of Riverside

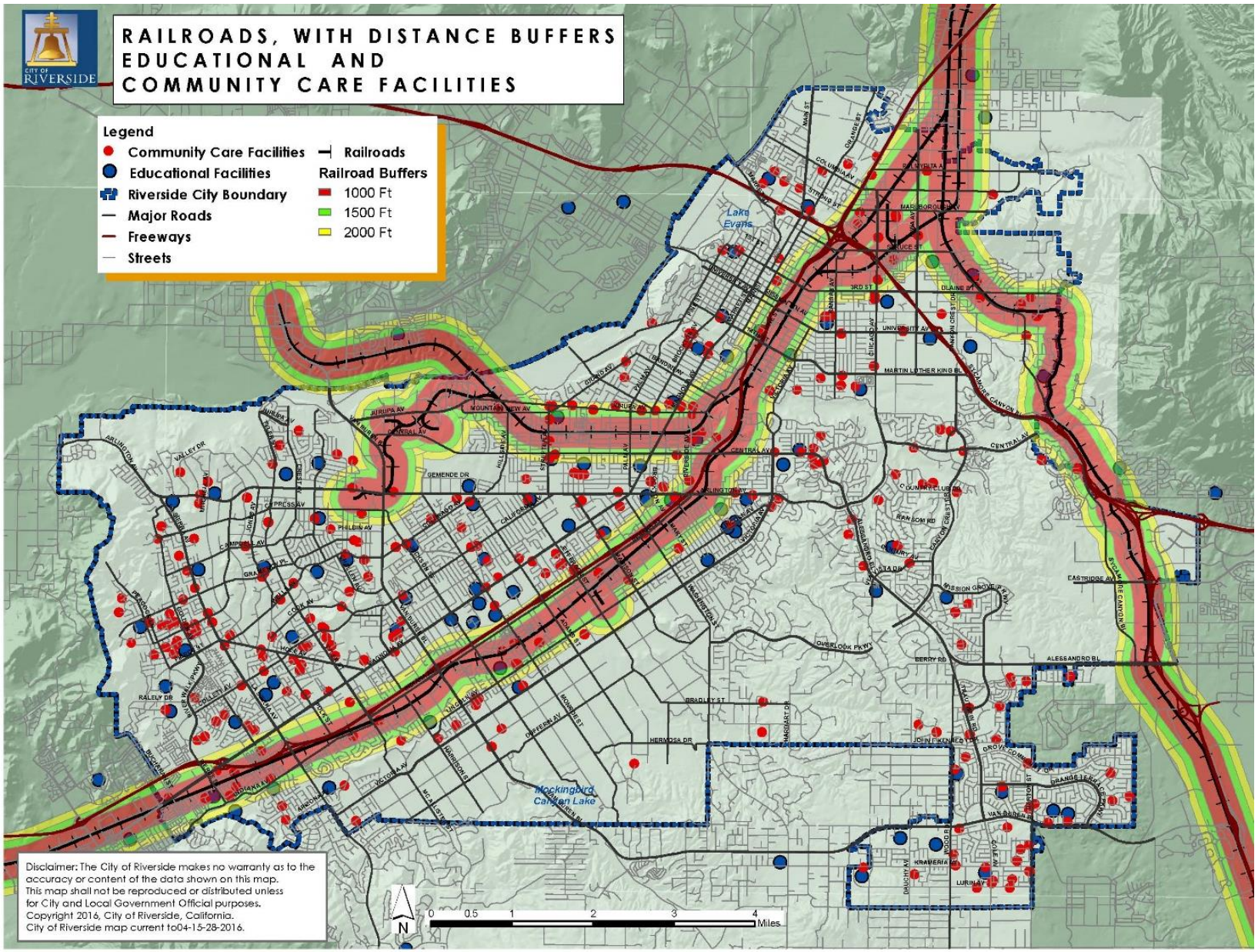


Figure 4.4.9 Public Safety Facilities – Railroads – City of Riverside

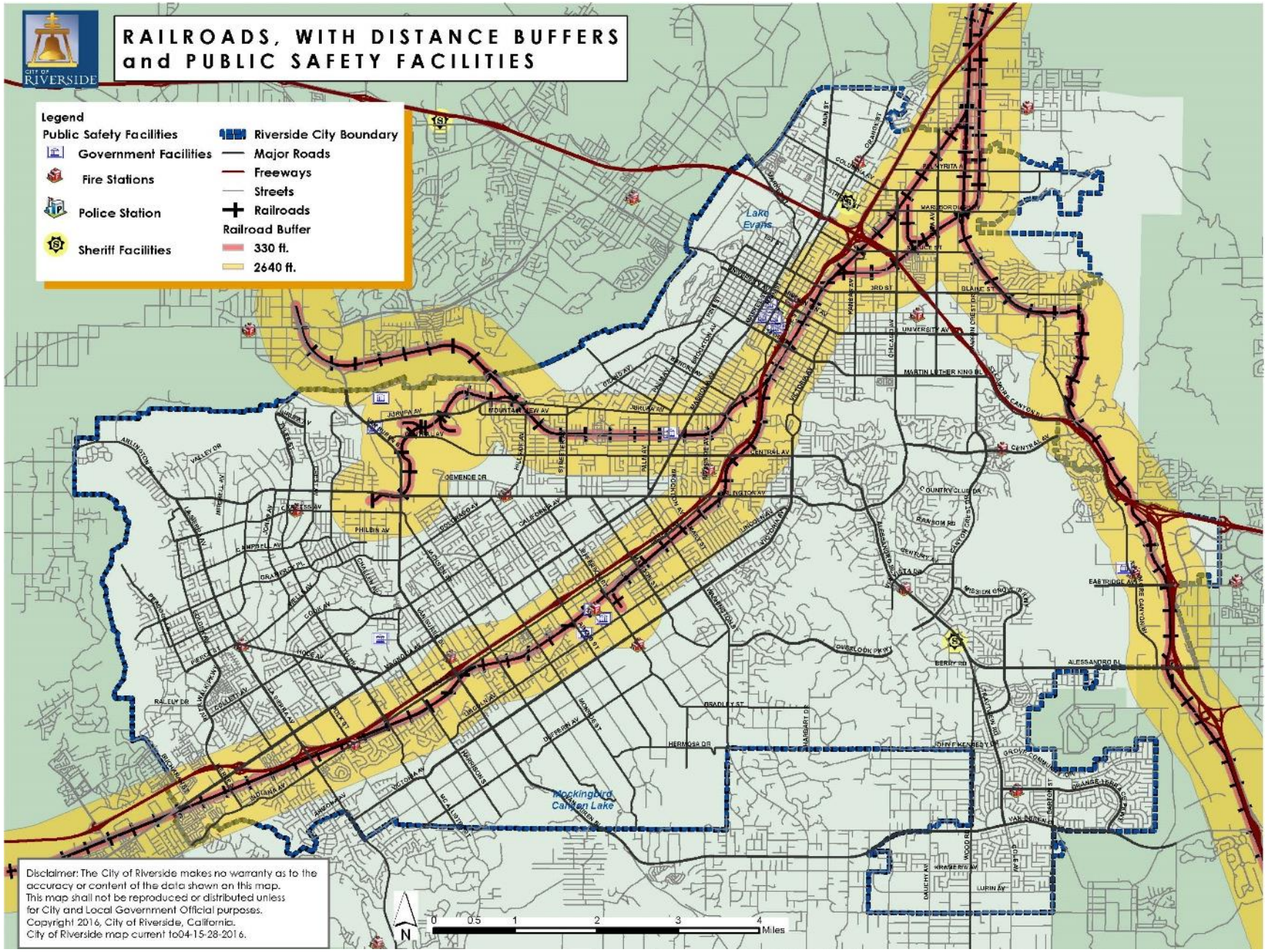


Figure 4.4.10 Schools and Community Services within Mile of Railroad

Schools and Community Services within Mile Railroad Buffer

SCHOOLNAME
Highgrove Elementary School
University Heights Middle School
North High School
Longfellow Elementary School
St Francis de Sales School
Indian Hills Elementary School
Lincoln Continuation School
Hyatt Elementary School
Magnolia Elementary School
Mtn View Elementary School
Pachappa Elementary School
Our Lady of Perpetual Help School
Sierra Middle School
Seneca Elementary School
Riverside Adult School
Riverside Christian Day School
St Catherine of Alexandria School
Arlanza Elementary School
Madison Elementary School
Edgemont Elementary School
Riverside Christian Middle School
Arlington High School
Hawthorne Elementary School
Harrison Elementary School
Orrenmaa Elementary School
Alvord Continuation High School
Hillcrest High School
Villegas Middle School
Grand Terrace High School
California School for the Deaf
Notre Dame High School
Sherman Indian High School
Riverside City College

WINTER WOODS COTTAGES
SOCIAL VOCATIONAL SERVICES, RIVERSIDE
BASIC OCCUPATIONAL TRAINING CENTER
OLIVE CREST
EASTER SEALS OF SOUTHERN CALIFORNIA
EAGEL TIME CARE FACILITY
GREENHOUSE FAMILY SERVICES
ULTIMATE SOLUTIONS CARE FACILITY INC.
ROSEMARY CHILDREN'S SERVICES FOSTER FAMILY AGENCY
INDEPENDENT OPTIONS, INC./ADVANCED OPTIONS
NINOS LATINOS UNIDOS, INC.
TOMLINSON FAMILY CHILD CARE
SALVATION ARMY RIVERSID CHILD CARE CTR., THE
INSTITUTE FOR BLACK PARENTING
PLYMOUTH TOWER CARE AND LIVING CENTER
ON THE MOVE ADULT DEVELOPMENT CENTER
MOVING FORWARD ADULT DEVELOPMENTAL CTR
UC RIVERSIDE CHILD DEVELOPMENT CENTER
UC RIVERSIDE CHILD DEVELOPMENT CENTER
SHIRU RESIDENTIAL HOME
S & E BOARD AND CARE
HERNANDEZ FAMILY CHILD CARE
YMCA OF RIVERSIDE CITY AND COUNTY-LONGFELLOW ELE.
RUSD/LONGFELLOW ELEMENTARY SCHOOL
OCS ST. FRANCES DE SALES PRESCHOOL

APPLE TREE LEARNING CENTER
JONES RESIDENTIAL
CHAMPIONS BEFORE AND AFTER SCHOOL PROGRAM
RUSD MAGNOLIA ELEMENTARY STATE PRESCHOOL
RIVERSIDE RESOURCE CENTER
LUCAS FAMILY CHILD CARE
AGAPE CARE HOME RIVERSIDE
GOLDEN D. CARE HOME LLC
GOLDEN DREAMS CARE HOME FOR THE ELDERLY
AGAPE CARE HAVEN
GROWING PLACE, TOO, THE
GROWING PLACE, TOO, THE
FIRST CHRISTIAN NURSERY SCHOOL
JAHLANII RESIDENTIAL CARE
CHILDREN'S DISCOVERY CENTER
RUSD/MT. VIEW ELEMENTARY
LUTOVSKY FAMILY DAY CARE
COCAN SMALL FAMILY HOME
WE KARE DAY CARE
WE KARE DAY CARE
MONTESSORI ACADEMY
RUSD/PACHAPPA ELEMENTARY SCHOOL
RAINCROSS AT RIVERSIDE
MCKINLEY CHILDREN'S CENTER
OCS OUR LADY OF PERPETUAL HELP PRESCHOOL
CANMORE HOUSE, INC.
GUTIERREZ FAMILY DAY CARE
CANMORE HOUSE, INC.
BLESSED ELDER CARE, INC.
AURELIA'S ASS'T LIVING FOR THE ELDERLY
HORRIGAN COLE ENT. DBA: COLE VOCATIONAL SERVICES
LUCKY KIDS MONTESSORY ACADEMY
LUCKY KIDS MONTESSORI ACADEMY
KOSTECKI SMALL FAMILY HOME-ADULTS/ELDERLY

CAZAS RESIDENTIAL #2
WALDEN FAMILY SERVICES
SCHOOL TIME CHILDREN'S LEARNING CENTER
MAJESTY VILLAGE
RUSD/MADISON ELEMENTARY SCHOOL (ROOM K)
RIVERSIDE MONTESSORI ACADEMY
VILLA ANNE
CHUQUIMIA'S ADULT RESIDENTIAL FACILITY
ASTERIA HOME CARE
INDEPENDENT OPTIONS/JEFFERSON HOUSE
CASA BLANCA HEAD START PROGRAM
CASA BLANCA CHILD CARE CENTER
CASA BLANCA INFANT/TODDLER CENTER
ADVANCE ENTERPRISES RIVERSIDE
INDEPENDENT OPTIONS INC/LIMESTONE HOUSE
PEREDA FAMILY DAY CARE
BOCLEAIR FAMILY CHILD CARE
RUSD/HAWTHORNE ELEMENTARY SCHOOL
KATHLEEN SACHS G.H.
WOODVILLE MANOR II
ASPIRANET
SHAH FAMILY DAY CARE
TOMASINA'S HOME
SHADY VIEW BOARD & CARE
ROYAL PALM HOME, INC.
WESTVIEW MAGNOLIA BEHAVIOR MNGMNT PROG.
INDEPENDENT OPTIONS, INC./NUTMEG HOUSE
HARVEY HOUSE, THE
NATIONAL HOUSE
CASA SANTALLA

Airports and Air Transportation

Air transportation hazards not only include our local airports, but also the fact that many of the flight paths into and out of airports such as Ontario, Long Beach, Orange County, LAX, Riverside Municipal, Flabob, Corona, and March Reserve Base, all cross over the City. Only a small number of aircraft accidents have occurred within the sphere of the City, and those were all small planes crashing into the ground. The potential for a single large commercial or military aircraft crash or some type of mid-air accident are remote, but have the potential to cause significant damage and/or death from passengers on the plane or people on the ground. Local airports of interest are:

Ontario Airport

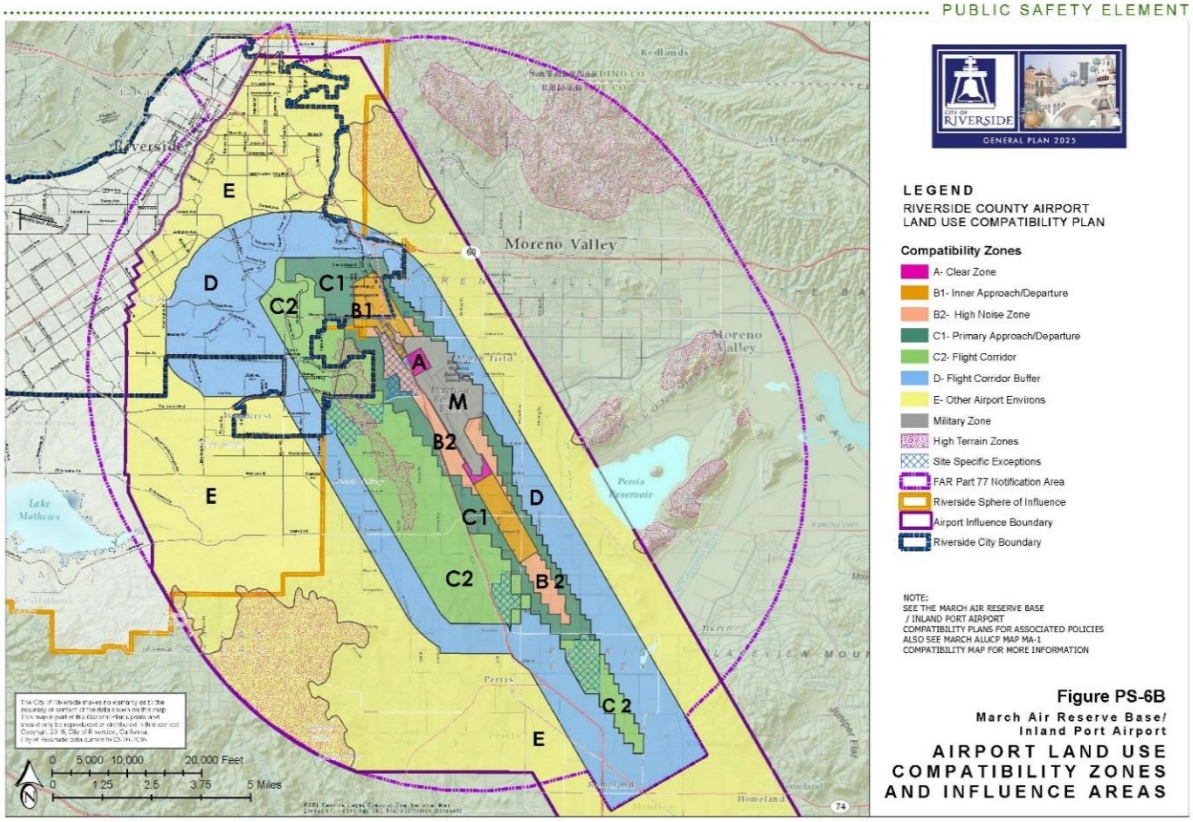
The nearest commercial airport to the City is Ontario Airport. The airport is a combination of cargo and passenger services. It is ranked as the 46th busiest airport nationally in terms of air travel and cargo.

March Air Reserve Base

This base is located on the easterly border of the City. Once an active Air Force base, it is now a large military reserve base. Activity at the base has increased rather than decreased since its transition to a reserve base. It currently houses the State Air National Guard, Air Force reserve units, federal law enforcement ground and air operations, and most recently is being developed as a joint use facility for civil air cargo operations. One of the primary military missions of the base is the transportation of military personnel to and from overseas locations, usually by commercial carrier. It also houses KC-135 air refueling tankers, F-16 combat jets, and C-17 cargo planes. The KC-135 flights leaving March on missions are carrying a full load of jet fuel, increasing the hazards should one crash off-base in the City. The base is also identified as a FEMA jump-off and landing location for FEMA resources. Although the base does have its own fire agency, the base relies on mutual aid agreements for additional fire and law enforcement assistance.

There have been no major aircraft incidents in the City created by aircraft from the base, although the potential is high as the normal practice path for aircraft is to take off in a northerly direction, turn west traveling over the City, and then land from a southerly direction.

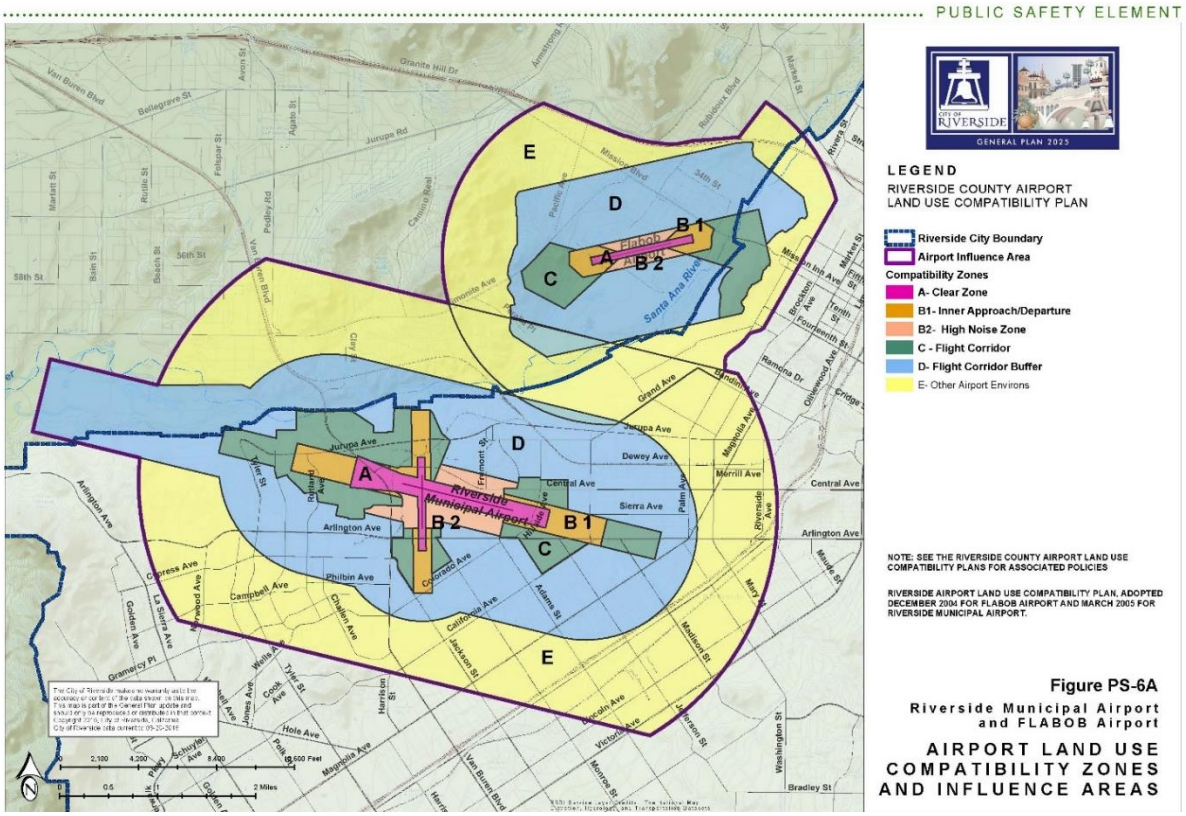
Figure 4.4.11 March Land Use Compatibility Area



The Riverside Municipal Airport

This is a general aviation/executive airport with an average of 7000 flights per month. The airport is host to mostly small private and small to medium executive type aircraft, but does have the ability to handle a plane up to the size of a 737 or a military C-17. The military practices yearly landing and taking off from the airport. In the past ten years there have been three aircraft crashes near the airport.

Figure 4.4.12 Airport Land Use Compatibility Areas



(See Riverside County OA MJHMP Section 5.3.14)

Water System - Severity – 2, Probability – 2, Rank 10

The City owns and operates both the drinking water and sewage systems. The various water pipelines running through the City may not be as volatile as a natural gas, petroleum, or aviation fuel line, but as a hazard, these pipelines can cause physical damage to the City's infrastructure, as well as creating a health risk. Many of the City's pipelines are of significant age and subject to breaking.

Besides the impact of an earthquake on these systems, the second greatest concern for both systems is damage caused by contractors digging in the area where there are pipes. Although

there are in place ways for contractors to become aware of the locations of pipelines, many of the incidents have been as a direct result of a contractor's digging or excavating.

Drinking Water Systems

Water Transportation Pipelines

Water transportation pipelines that support Southern California traverse the City. The sizes of these lines range from 20 inches up to as large as 42 inches. Among the pipelines in the area is the Colorado Aqueduct that runs from Parker Dam to Lake Mathews. Damage to one of these lines can cause contamination to the fresh water supply throughout the region as well as disruption of the supply of regional drinking water.

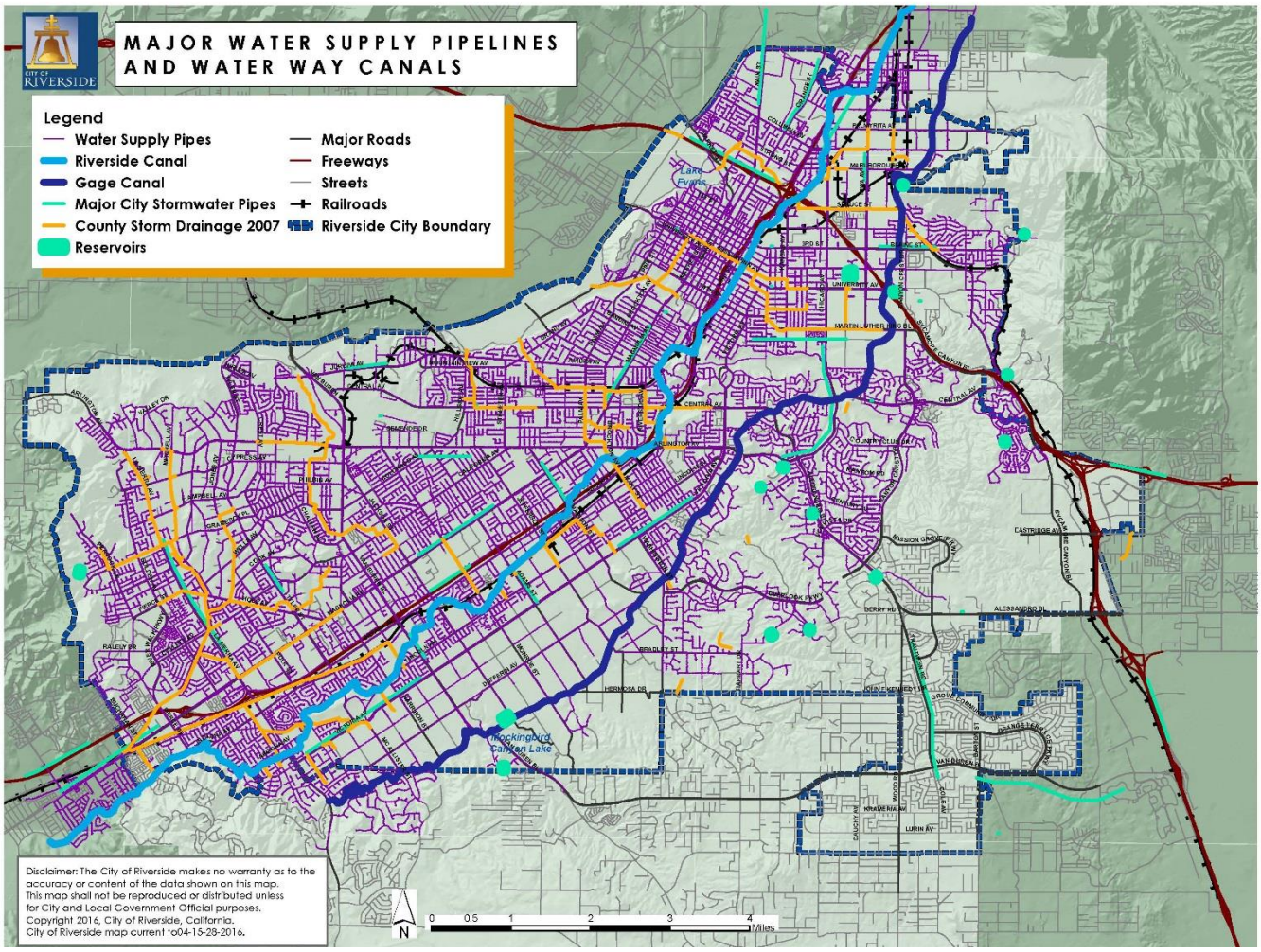
City Drinking Water

The City of Riverside Public Utilities, Water, provides drinking water to approximately 288,000 people mostly within the City. An average of approximately 68 million gallons of water per day are transported and distributed through approximately 967 miles of pipeline and stored in 16 reservoirs. Riverside's water system also includes 10 water treatment plants, 51 domestic wells, 39 booster pump stations and 14 miles of canal. Local drinking water is obtained from water wells located in the City of San Bernardino. The City relies on pipelines running from wells in San Bernardino, across the 10 Freeway, through Grand Terrace and into the filtration and treatment plants. The wells rely on electricity not supplied by the City, but rather Edison. Both the water wells and the local transport water lines are in close proximity to the San Andreas Fault and various rail tracks. These pipelines are subject to damage from earthquakes, flooding, and power outages. Once the water reaches the City, it is either stored in one of the 16 above ground water tanks or closed reservoirs (storage capacity designed to provide one peak day of supply or up to three (3) to five (5) days under emergency conditions) or pushed out to the City through smaller distribution lines. The City's drinking water supply is also the water supply for its fire hydrants. A small portion of the City has water supplied by the Western Municipal Water District.

The Gage Canal/Pipeline

This system of canals and pipelines is the primary source of water for the agricultural industry in the City of Riverside. Should there be a loss of this canal system; there would be a significant impact on the citrus industry in the City of Riverside.

Figure 4.4.13 Water Supply Pipelines and Canals



(See Riverside County OA MJHMP Section 5.3.20)

Hazmat Accidents – Industrial - Severity – 2, Probability – 3, Rank 11

A hazardous chemical release in the City of Riverside would most likely involve either legal transportation of chemicals by railroad or commercial truck carrier or the handling of chemicals at a licensed facility. Illegal activities such as a clandestine lab or illegal dumping of chemical waste have been identified as threats within the community. The City has not had a major hazmat release or spill in the past 10 years. There have been several illegal labs discovered in the City. The City has one EPA superfund site in the City and two within its sphere of influence. Hazardous materials can be found in three formats: legal/licensed sources, illegal sources, and illegal dumping.

LEGAL SOURCES - These are licensed companies/businesses and common carriers on the roadways. There are approximately 700 licensed hazardous material sites in the City. These facilities are a combination of large quantity and small quantity users. Small quantity users are school laboratories, department stores, home improvement stores, etc. Large quantity users include gas stations, chemical production companies, warehouses, and large storage facilities with large refrigeration units. There are locations within the City that use and/or store radioactive material for various medical and research activities. See Figure 4.3.6 Hazardous Material Site Map.

ILLEGAL SOURCES - These situations involve clandestine labs. The majority of clandestine labs in the area are involved in the production of methamphetamine, but a number of other drugs may also be synthesized, including phencyclidine (PCP), methylenedioxyamphetamine (MDA) and methylenedioxymethamphetamine (MDMA), lysergic acid diethylamide (LSD), methcathinone (CAT), amphetamine, and other controlled substances. Generally, these illegal labs are quite volatile because of the chemicals used and the production methods used. The locations are not constructed in a way to prevent fires, explosions, or toxic releases and the locations are not known to law enforcement or fire. There have been numerous labs of this type located in the City. See Figure 4.4.14- 4.4.15 Hazardous Waste Sites.

Clandestine Dumping

This is the criminal act of disposing of toxic materials and hazardous waste on public or private property. As the costs and restrictions increase for legitimate hazardous waste disposal sites, the number of illegal dumping of hazardous materials has increased proportionately.

Figure 4.4.14 Hazardous Material Site Map – City of Riverside

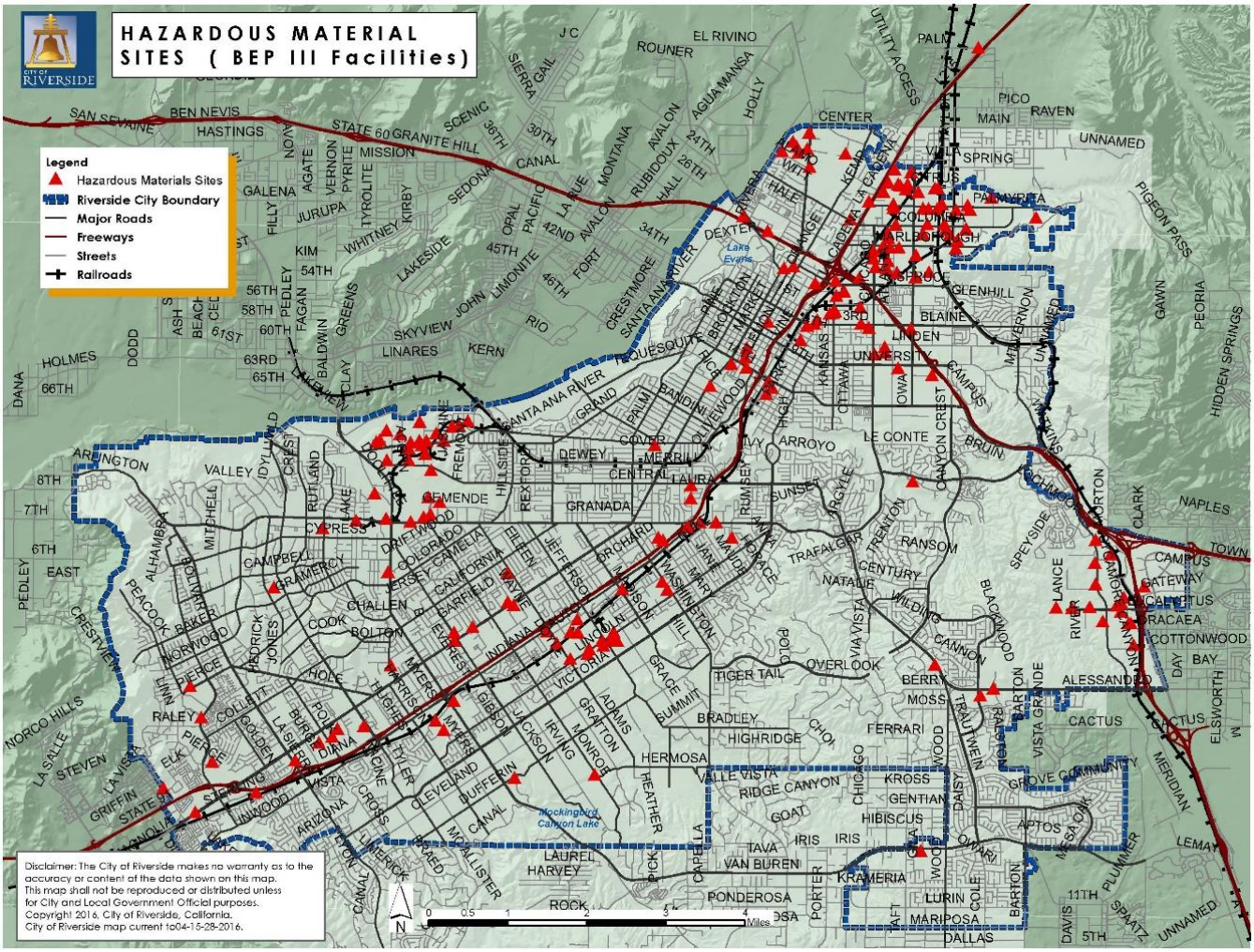
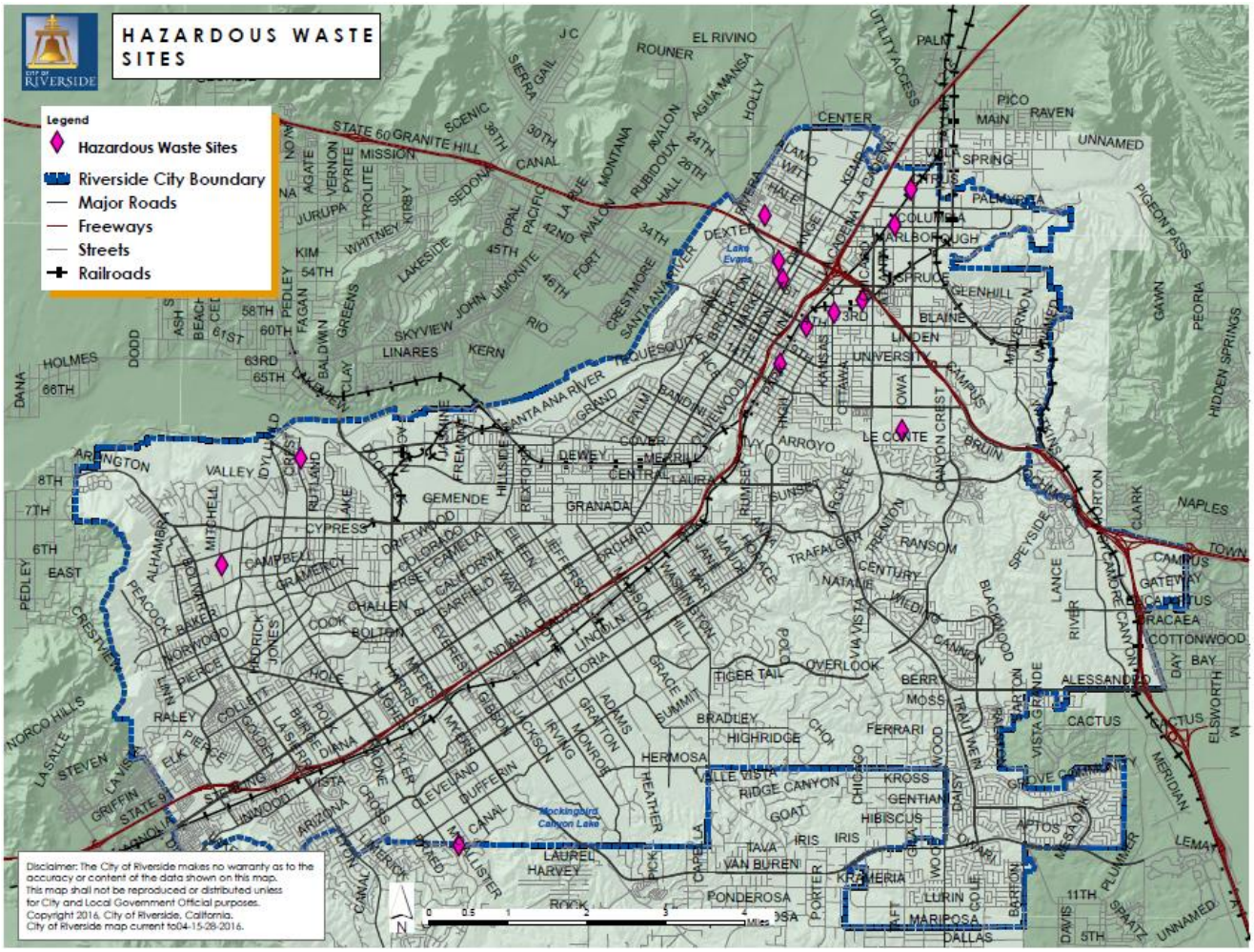


Figure 4.4.15 Hazardous Waste Sites – City of Riverside



(See Riverside County OA MJHMP Section 5.3.12 and 5.3.22)

Cyber Security- Severity – 2, Probability – 2, Rank 12

The City of Riverside has multiple Critical Infrastructure services that rely on technology and could be vulnerable to a cyber-attack.

1. Denial of service
    a. Public facing websites and internet facing services are vulnerable to denial of service attacks disrupting electronic communication capabilities
2. Malicious software
    a. The City has a large number of users utilizing various types of software and computing technologies; aging systems can be exploited to run unauthorized malicious software or grant an attacker access to non-public information
    b. Employees access the internet and email as a part of their daily duties, malicious software, ransomware, phishing, malvertising or exploits could compromise a user or a workstation.
3. Loss, theft or damage of electronic assets
    a. The City's electronic assets are vulnerable to natural, or man-made disasters that could result in service disruption
    b. Employee's computers and mobile devices can expose sensitive data if lost or stolen.

(See Riverside County OA MJHMP Section 5.3.6)

Gas/Fuel Pipeline Disruption - Severity – 2, Probability – 2, Rank 13

The term "pipeline" relates to natural gas, petroleum, and aviation fuel lines. Besides the impact of an earthquake on these systems, the second greatest concern for these pipelines is damage caused by contractors digging in the area where there are pipes. Although there are methods in place ways for contractors to become aware of the locations of pipelines, many of the incidents have been as a direct result of a contractor's digging or excavating. The specific number and locations of the various high pressure natural gas, aviation, and fuel lines are known by public safety responders, however the specific locations and descriptions are restricted as Law Enforcement Sensitive by Department of Homeland Security requirements. See Figure 4.3.8 Pipelines and Water Way Canals Map displays a rough placement of the pipelines within the City. The following types of pipelines are within the City and are possible hazards.

Natural Gas Lines

Traversing the City are several high pressure natural gas lines. These natural gas lines are classified into two categories:

Local distribution lines:

These lines are designed to provide natural gas into the community for residential and commercial use. These lines usually run down the middle of the street and can be located within the general vicinity of a school, railroad track, or freeway. These pipes are generally the cause of the pipeline incidents in the City when they are broken by someone digging in the street. These lines are both cast iron and the new plastic lines.

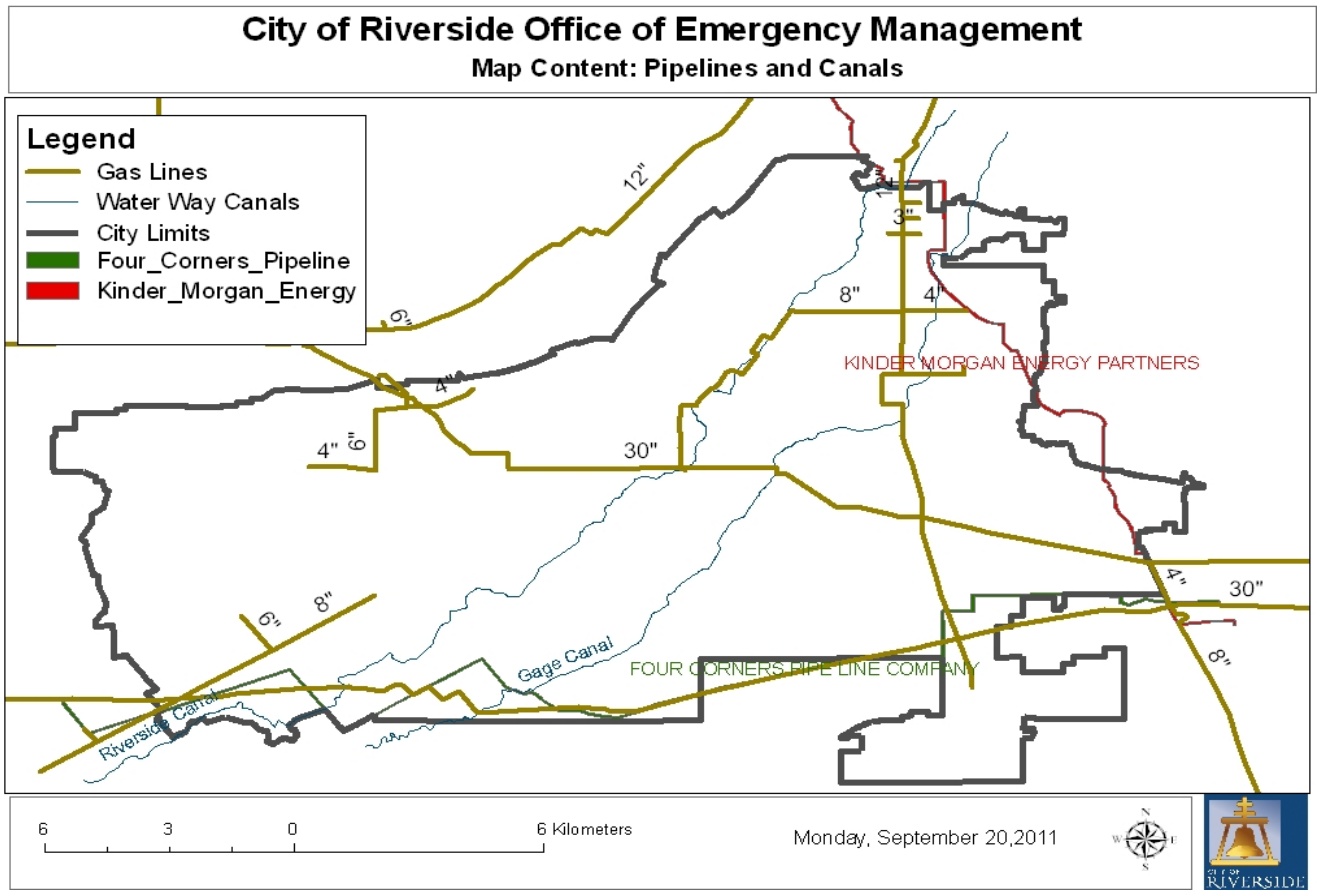
Intra and Inter State transport lines:

These pipelines carry natural gas at pressures anywhere from 200 to 1500 pounds per square inch (psi) and are much larger than the local distribution lines. The natural gas in these lines is being transported to locations in and out of the state.

Aviation and Petroleum Lines:

Many of the petroleum lines traversing the City start in the refinery areas in Los Angeles County and provide petroleum projects to the various commercial distribution tank farms and rail centers both locally and out of state. These pipelines range from 6 inches to 14 inches in size. In some instances, these pipelines are within the general vicinity of a school, railroad track, or freeway. Kinder/Morgan runs from Jurupa through the City of Riverside to March Air Force Base. The line is 14.53 miles long and it carries Jet-A fuel and refined petroleum.

Figure 4.4.16 Pipelines



(See Riverside County OA MJHMP Section 5.3.20)

Communications Outage - Severity – 2, Probability – 2, Rank 15

The City's communications systems are vulnerable to natural, or man-made disasters that could result in service disruption. As the home of two emergency communications centers a disruption could not only be an inconvenience but a risk to public safety if 911 communications is down.

(See Riverside County OA MJHMP Section 5.3.8)

Sewer System - Severity – 2, Probability – 2, Rank 16

Waste water and rain runoff from Riverside's residential, commercial and industrial contributors is collected through over 1,100 miles of sewer pipeline from 5 locations that flow into the treatment plant. The City's sewer pipes are all underground and are susceptible to being broken by contractors digging in the streets and on property. The City has had several events each year where pipelines have been damaged in this manner with disruption of service being

minor. These pipelines can cause physical damage to the City's infrastructure, as well as creating health risks. Many of the City's pipelines are of significant age and subject to breaking.

Waste Water Treatment Plant

The City's waste water treatment plant receives wastewater and storm water runoff. The Riverside Water Quality Control Plant provides treatment of all domestic and industrial wastewater generated within the City and in the Rubidoux, Edgemont, and Jurupa Community Services Districts There is only one primary collection pipe that collects storm water and carries it to the plant and in heavy rains, the City has experienced sewage backup into the City streets. Once the sewage has been treated, the water is used for recharging the aquifer under the Santa Ana River. Primary power for the plant is supplied through the normal City supplied electrical service and is directly connected to one of the City's cogeneration plants should there be a loss of primary power. Many of the plants pipelines and treatment systems are old, which has caused issues in the past. The plant does not use liquid chlorine as part of its processing.

Pandemic/Disease/Contamination - Severity – 2, Probability – 2, Rank 18

A disease outbreak can cause illness and result in significant casualties. Since 1900, there have been three influenza pandemics that killed approximately 600,000 people in the United States. The 2009 H1N1 flu, first identified in Imperial and San Diego counties, killed more than 550 Californians, sent thousands more to hospitals, caused widespread fear and anxiety and the declaration of a public health emergency. H1N1 in 2009 tested the State's medical infrastructure as never before. H1N1 quickly spread nationwide and then around the globe, taking a heavy toll on people not usually susceptible to serious influenza.

(See Riverside County OA MJHMP Section 5.3.2 & Section 5.3.5)

Dam Failure/Inundation - Severity – 2, Probability – 1, Rank 19

Although very unlikely, a catastrophic uncontrolled release of water from a dam would devastate large portions of the City. The event would more likely be a situation of a dam overtopping where water behind the dam sloshes over the top of the dam as a result of an earthquake or heavy rains or a higher than normal release of water from the dam in order to prevent overtopping or dam damage. This usually happens in heavy rains. The City has had events related to high water releases. Because most of the City's dams/reservoirs have little or no levee systems downstream, the flow of water would be mainly uncontrolled. There are nine dams in the City of Riverside area. They are Alessandro Dam, Mary Street Dam, Box Springs Dam, Harrison Dam, Lake Matthews Dam (Dike 1 and 2), Mockingbird Canyon Dam, Prenda Dam, and Woodcrest Dam. All of the dams except for Lake Mathews are made of compacted earth. Lake Matthews Dam (Dikes 1 and 2) has concrete faces to prevent wash action. Of these dams, Mockingbird Canyon and Lake Matthews could have a significant impact on the City in the event of a dam event.

Figure 4.4.17 Dam Inundation Zones – City of Riverside

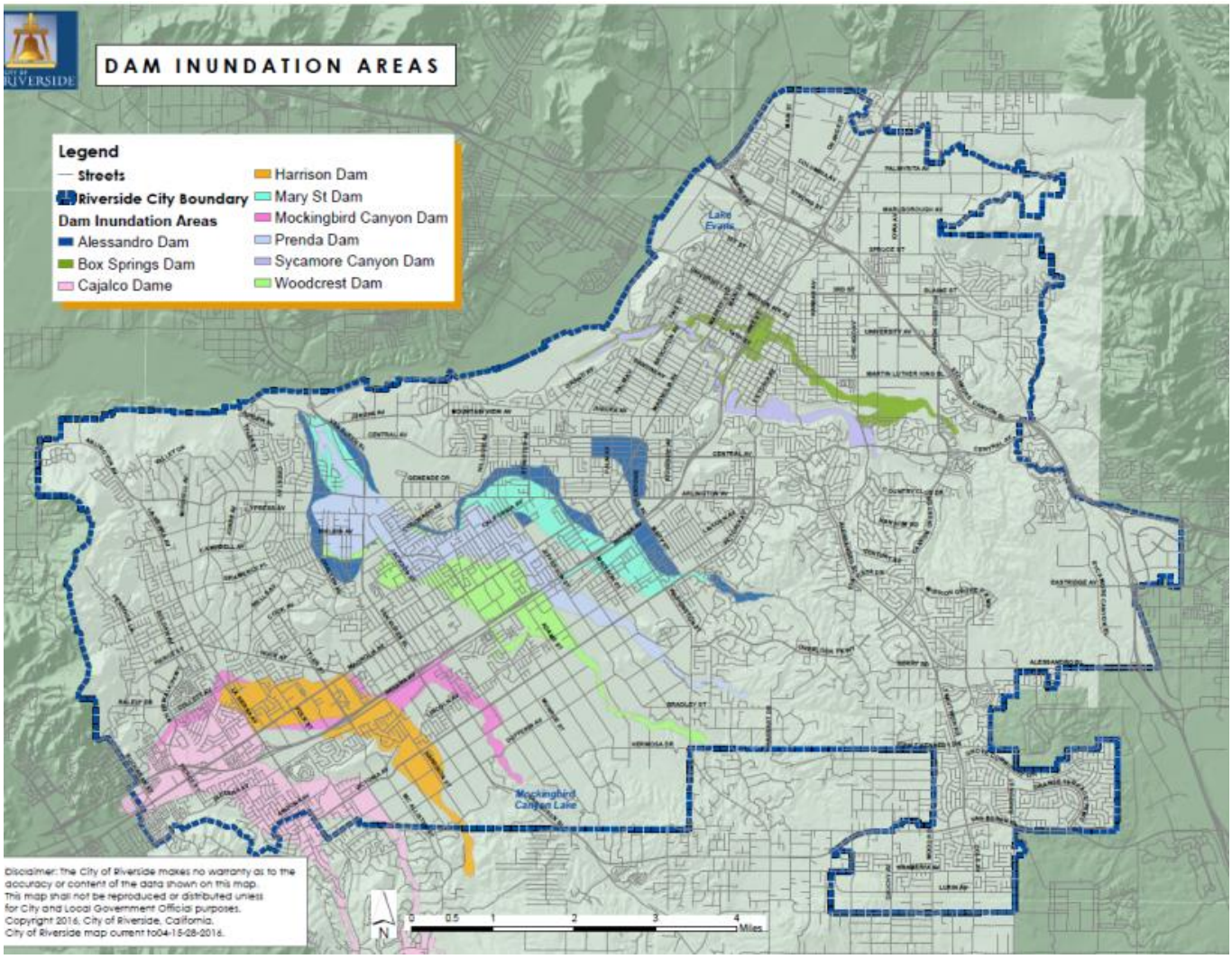


Figure 4.4.18 Dam Inundations Zones – Schools and Care Facilities – City of Riverside

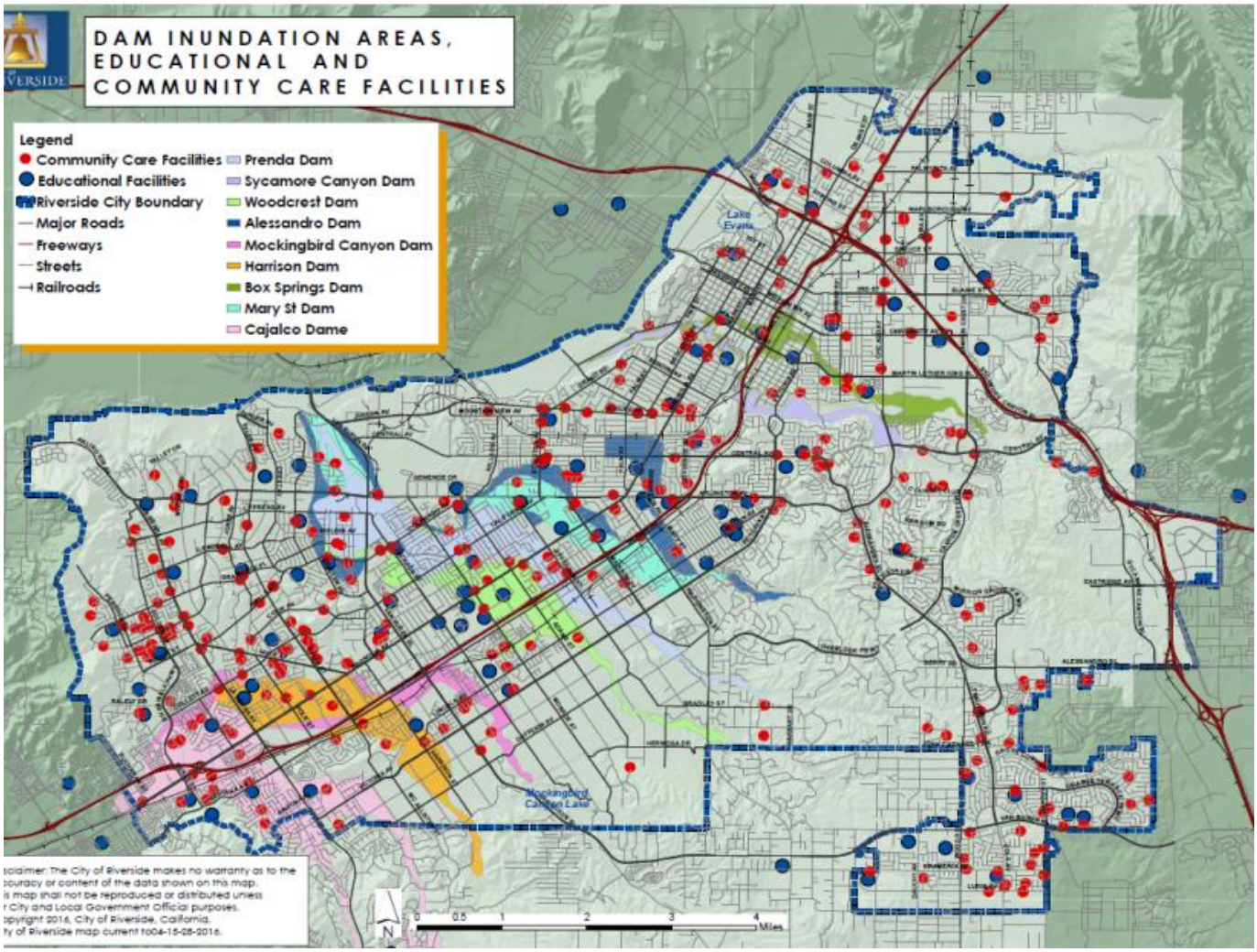
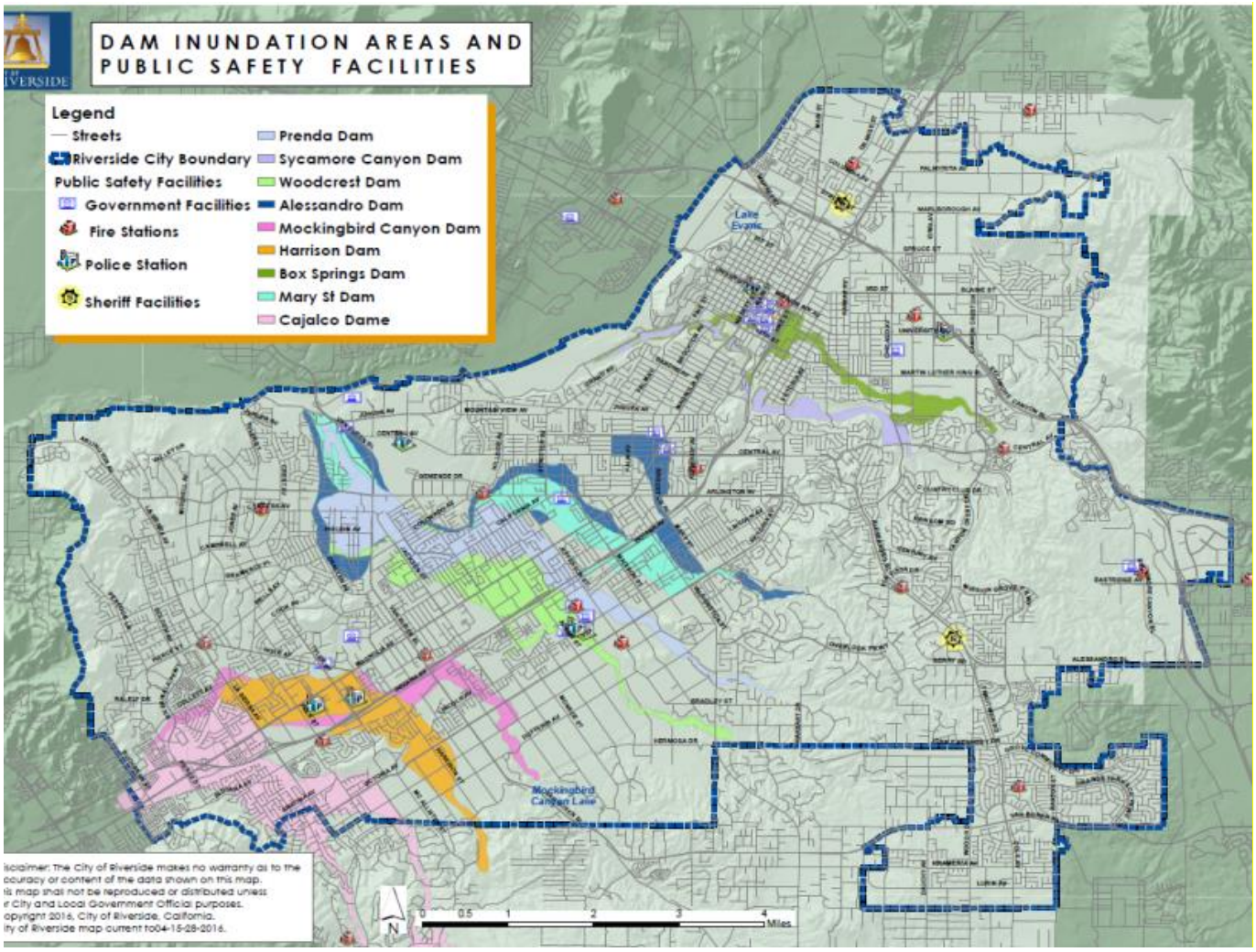


Figure 4.4.19 Dam Inundation – Public Safety Facilities – City of Riverside



(See Riverside County OA MJHMP Section 5.3.15)

Insect Infestation - Severity – 2, Probability – 2, Rank 20

Insect infestation occurs when an undesirable type of insect inhabits an area in a manner that causes serious harm to: cash crops, livestock, or poultry; wild land trees, plants, or animals; or humans. Countless insects live on, in, and around plants, animals, and humans in all environments. Many are harmless, while others can cause fatal damage. Under some conditions, insects that have been present and relatively harmless can become hazardous. For example, severe drought conditions can weaken trees and make them more susceptible to destruction from insect attacks.

Insect infestation is an ongoing threat to agriculture and public health. The effects on people and property can be disastrous and costly.

(See Riverside County OA MJHMP Section 5.3.18)

Civil Unrest - Severity – 2, Probability – 2, Rank 21

The City has been the focal point of numerous civil protests over the past ten years. Although none of these have been overly violent or caused major property damage, but the potential for large scale events is always present. The majority of events fall under the classification of civil protest (picketers, etc.) rather than civil unrest (mobs, looting, property damage, etc.). With the large number of facilities located in the City that represent Federal, State, and Local governments, along with the various colleges and universities, the City has averaged some type of protest on a monthly basis.

(See Riverside County OA MJHMP Section 5.3.10)

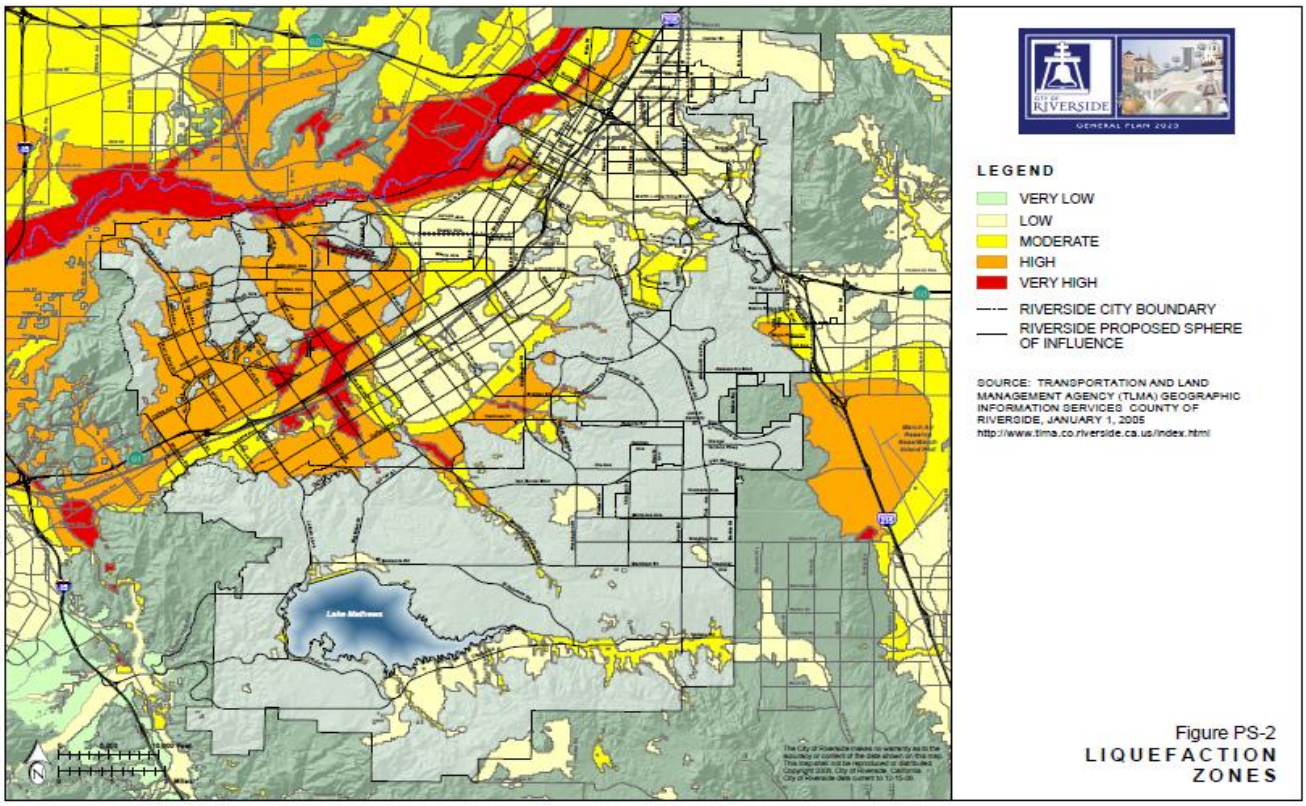
Landslides/Liquefaction - Severity –1, Probability – 1, Rank 22

Liquefaction and natural ground failures are a phenomenon generally associated with earthquakes. The City has had many small ground failures (landslides and sink holes) generally associated with heavy rains. Liquefaction and related phenomena is when the strength and stiffness of a soil is reduced by earthquake shaking or other rapid loading.

There are four primary liquefaction areas in the City. These include the area along the Santa Ana River, a wide area south and west of the Riverside Municipal Airport, part of western Riverside spanning La Sierra Avenue and a smaller area along the City's southern boundary. Most of the Sphere of Influence area is not susceptible to liquefaction, except for alluvial drainages leading into Lake Mathews. **See Figure 4.4.20 Liquefaction Zone Map.**

Within Riverside, most natural slopes are relatively flat, generally less than fifteen percent, with some slopes ranging from fifteen to in excess of thirty percent in the southeastern and western portions of Riverside. Principal areas of steep slopes include the Box Springs Mountains, Alessandro Heights, Hawarden Hills and the east-facing slopes of the Norco Hills. Many slopes in the Sphere of Influence are steeper than those within the City. The portions of Riverside susceptible to landslides and rock falls include areas in western and northeastern Riverside. Land sliding may result from heavy rain, erosion, removal of vegetation, seismic activity or combinations of these and other factors.

Figure 4.4.20 Liquefaction Zones



(See Riverside County OA MJHMP Section 5.3.21).

Nuclear Accidents – SONGS - Severity – 1, Probability – 2, Rank 23

The City is located within the 35 and 50-mile Emergency Planning Zones of San Onofre Nuclear Generating Station (SONGS). SONGS was a power plant jointly owned by Southern California Edison, San Diego Gas and Electric, and the cities of Riverside and Anaheim. **As of 2017 SONGS is in decommissioning process.**

The Nuclear Regulatory Commission defines two emergency planning zones around nuclear power plants for planning purposes in the case of an accident: The City lies within the Ingestion Pathway Zone.

Emergency Planning Zone (EPZ)

The federal government requires that communities within approximately 10 miles of a nuclear power plant be included in an EPZ Plan that provides for a plume exposure pathway zone with a radius of 10 miles (16 km), concerned primarily with exposure to, and inhalation of, airborne radioactive contamination.

Ingestion Pathway Zone (IPZ)

An ingestion pathway zone of about 50 miles (80 km) is concerned primarily with the ingestion of foods and liquids contaminated by radioactivity. The purpose of this zone is to prevent the accidental ingestion of deposited radioactive materials by humans and livestock.

(See Riverside County OA MJHMP Section 5.3.12).

Jail/Prison Incident - Severity – 1, Probability – 2, Ranking 25

Vulnerability due to presence of county correctional facilities being located within the city.

(See Riverside County OA MJHMP Section 5.3.19).

Table 4.4.21 Major City Related Incidents 2000 to 2017

(Disaster/Incident	Significant Incidents/Facts/Comments
Earthquake 5.0 or larger	No major damage reported from local earthquakes.
Wildland Fire (20 acres or more)	Presidential Declarations - DR 1810, 1731, 1498
Flooding	Presidential Declarations – 2005: DR-1577, DR-1585 2010: DR-1884, DR-1952 2013: 8/29/13 Rain Event 2014: September 7 Rain Event 2017: DR-4305
Winter Weather	4-5-06 Severe hail storm in Riverside-Corona area Extreme Cold – 1-12/18-07 -Extended extreme cold causing major citrus damage in City
Extreme Heat	Extreme Heat 9-1-02 - 112 Degrees 6-18-16 -111 Degrees
Severe Wind/Tornado	**Funnel Cloud** – 1-9-05 Riverside/Jurupa area **Tornados** 5-5-06 - In the area of 215/60 Fwy 5-22-08 - 215/60 Fwy 4 separate tornados causing 9 car train derailment, on the ground for approximately 15 minutes Wind: 9/8/15 Wind knocked down several trees and power poles 3/11/16 Strong wind downed trees and power lines.
Agricultural Disease/Contamination/Infestation	2004-2005 - West Nile Disease requiring the destruction of chicken flocks
Sewer System Failure or Damage	Primary cause was contractor working in the area
Major Gas/Fuel Pipeline	5-11-04 - Natural Gas Line over 60 Fwy @Blaine

	Construction workers cut gas main causing evacuation of 5,000 residents and student dorms at UCR for approximately 6 hours
Transportation Incidents/Accidents – Rail/Aircraft/Highway	Primary accidents were train v. pedestrian and train v. vehicle, resulting in several fatalities. No train v. train incidents have occurred. Small plane crashed ¼ mile from airport, February 27, 2008. Small plane crashed into neighborhood July 26, 2015. Small plane crashed into neighborhood February 27, 2017.
Power Outage	03-01 Rolling Blackouts –for three days 10/25/07 Total blackout of the entire City lasting approximately 6 hours
Dam Inundation	12-22-10 - Release of a high volume of water from Sycamore Canyon Dam during heavy rains resulting in the complete roadway washout - Chicago Ave @ Central
Hazmat Accidents Industrial	6/25/07 Major Fire at Hazmat Site closing the 60 Fwy for 4 hrs.

Sources: (1) City of Riverside Fire and OEM Incident History (2) San Diego National Weather Service

SECTION 5.0 – COMMUNITY RATING SYSTEM

5.1 REPETITIVE LOSS PROPERTIES

While the City of Riverside has no NFIP insured structures that have been repetitively damaged. The following are repetitive flooding areas that in many cases have caused repetitive damage:

- 14th Street and Highway 91
- Arlington Avenue and the railroad tracks
- Van Buren Avenue and Indiana Avenue
- Mount Rubidoux Park
- Fairmount Park
- Lake Evans
- Downtown Area
- Don Derr Park
- University Avenue at the railroad tracks

5.2 NATIONAL FLOOD INSURANCE PROPERTIES

The City participates in the National Flood Insurance Program.

Describe participation in NFIP, including any changes since previously approved plan. The City of Riverside has participated in the National Flood Insurance Program since 1982. The current

Flood Insurance Rate Map (FIRM) was effective beginning August 28, 2008 with Letters of Map Revisions (LOMR) occurring 02/26/2010, 08/27/2010, 07/26/2011, 09/02/13, and 03/20/17.

a. **Date first joined NFIP**. 1982
b. **Identify actions related to continued compliance with NFIP**.
   When construction and plans are reviewed all projects are checked for compliance with the City's Floodplain Management Program. No projects are issued Grading or Building Permits unless it is in compliance. The City coordinates its floodplain activities with the Riverside County Flood Control District, which is the primary flood management agency in the County.
c. **CRS member?** No
d. **CRS class?** n/a
e. **Describe any data used to regulate flood hazard area other than FEMA maps**. Riverside Municipal Code 16.18
f. **Have there been issues with community participation in the program?** No
g. **What are the general hurdles for effective implementation of the NFIP?** None

i. **Summarize actions related to continued compliance with NFIP**
When construction and plans are reviewed all projects are checked for compliance with the City's Floodplain Management Program. No projects are issued Grading or Building Permits unless it is in compliance. The City coordinates its floodplain activities with the Riverside County Flood Control District, which is the primary flood management agency in the County.

ii. **Repetitive Loss Properties**

The City of Riverside has no NFIP insured structures that have been repetitively damaged by floods. (See Section 5.1, page 57. Description of Jurisdictions Type of Properties See Riverside County MJHMP Section ##, page ##.)

SECTION 6.0 - CAPABILITIES ASSESSMENT

6.1 REGULATORY MITIGATION CAPABILITIES

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment is divided into five sections –

- Regulatory Mitigation Capabilities
- Administrative And Technical Mitigation Capabilities
- Fiscal Mitigation Capabilities
- Mitigation Outreach And Partnerships

- Funding Sources

Regulatory Tool	Yes/No	Comments
General plan	Yes	General Plan 2025 Program for the City of Riverside, Adopted 2007 with Elements Updated in 2017
Zoning ordinance	Yes	Ordinance No. 6966, November 27, 2007, Riverside Municipal Code Title 19,
Subdivision ordinance	Yes	Ordinance No. 6968, November 27, 2007. Riverside Municipal Code Title 18
Site plan review requirements	Yes	Ordinance No. 6966, November 27, 2007, Riverside Municipal Code Title 19
Floodplain ordinance	Yes	Ordinance No. 6997, July 23, 2008. Municipal Code Chapter 16.18
Other special purpose ordinance (storm water, water conservation, wildfire)	Yes	General Plan – Land Use and Urban Design Element – The Built Environment, Growing Smarter, Updated March 2013. Proposition R and Measure C.
Building code	Yes	Ordinance No. 7237, November 27, 2013. Uniform Building, Mechanical and Plumbing, and National Electrical codes.
Fire Department ISO rating	Yes	Rating 2. Pursuing strategy to improve rating.
Erosion or sediment control program	Yes	
Storm water management program	Yes	
Capital Improvements Plan	Yes	Adopted August 27, 2013, Five-year plan; updated annually
Economic Development plan	Yes	2014/2015 Economic Development Plan Revised July 2014

Hazardous Materials Area Plan	Yes	Updated February 1, 2018
Local emergency operations plan	Yes	Emergency Operations Plan, 2011, parts updated in 2012, 2016 and undergoing full revision in 2017
Flood Insurance Study or other engineering study for streams	Yes	FEMA FIS 06065CV001C on April 19, 2017

CITY OF RIVERSIDE GENERAL AND ASSOCIATED PLANS

Long-range goals and objectives of physical form and amenity and provides guidance for developmental regulations, such as zoning and subdivision ordinances. The plan has numerous specific plans addressing geographical areas within the City. Major portions of the plan include:

- Land Use and Urban Design Element
- Circulation and Community Mobility Element
- Housing Element
- Education Element
- Public Safety Element
- Noise Element
- Public Facilities & Infrastructure Element
- Open Space and Conservation Element
- Air Quality Element
- Park and Recreation Element
- Historic Preservation Element

6.2 ADMINISTRATIVE/TECHNICAL MITIGATION CAPABILITIES

Personnel Resources	Yes/No	Department/Position
Planner/engineer with knowledge of land development/land management practices	Yes	Community & Economic Development Department – Director
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	City Engineer and Building Official
Engineer with an understanding of natural hazards	Yes	City Engineer and Building Official
Personnel skilled in GIS	Yes	Police, Public Works, Utilities, Planning Department, IT, and Fire

Full time building official	Yes	Building Official
Floodplain manager	Yes	Public Works Department
Emergency manager	Yes	Emergency Services Administrator
Grant writer	Yes	Internal personnel and some use of outside consultants
GIS Data—Land use	Yes	IT
GIS Data—Links to Assessor's data	Yes	IT
Warning systems/services (Reverse 9-11, outdoor warning signals)	Yes	Everbridge Mass Notification System

6.3 FISCAL MITIGATION CAPABILITIES

Financial Resources	Accessible/Eligible to Use (Yes/No)	Comments
Community Development Block Grants	Yes	
Capital improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	With voter approval
Fees for water, sewer, gas, or electric services	Yes	Water, electric, sewer, trash
Impact fees for new development	Yes	
Incur debt through general obligation bonds	Yes	With voter approval
Incur debt through special tax bonds	Yes	With voter approval
Incur debt through private activities	No	
Withhold spending in hazard prone areas	Yes	
Other		

6.4 MITIGATION OUTREACH AND PARTNERSHIPS

The Office of Emergency Management is responsible for the coordination and management of mitigation activities. It brings together city departments to discuss and provide advice on potential mitigation activities. The office provides public education to residents and business

of potential mitigation and prevention strategies they may take to lessen a disasters impact. The Office helps identify funding opportunities for departments to implement mitigation.

The City has an existing water responsibility program and annual fire safety programs throughout the year at special community events. The City has an automatic aid agreement for fire with the City of Corona and Riverside County Fire. The City is also part of the regional and statewide fire and law mutual aid system.

The City's Office of Emergency Management is working with Riverside City School District, UCR, and other higher education sites to assist in identifying risk on and around campus sites.

6.5 FUNDING OPPORTUNITIES

The City of Riverside has the same funding opportunities as Riverside County.

(See Riverside County OA MJHMP Section & Table 7.4)

SECTION 7.0 - MITIGATION STRATEGIES

7.1 GOALS AND OBJECTIVES

Goal 1: Provide Protection for People's Lives from All Hazards

Objective 1.1: Increase the methods of providing timely notification and direction to the public of imminent and potential hazards.

Objective 1.1.1: In addition to the City's emergency notification system, increase the use of the City's and OEM's website and social media pages to provide emergency notification and direction.

Objective 1.1.2: In conjunction with school districts, colleges and universities, insure that the respective notification system receives City notifications and passes them on.

Objective 1.2: Protect public health and safety by preparing for, responding to, and recovering from the effects of natural or technological disasters.

Goal 2: Protect the Community Through Awareness about Hazards and Associated Vulnerabilities That Threaten Our Communities

Objective: 2.1: Increase public awareness about the nature and extent of hazards they are exposed to, where they occur, what is vulnerable, and recommended responses to identified hazards (i.e. both preparedness and response).

Objective 2.1.1: Create/continue an outreach program, provide educational resources, and develop and provide training.

Objective 2.1.2: Coordinate with local agencies and organizations to educate all residents and businesses to take appropriate action to safeguard life and property during and immediately after emergencies.

Goal 3: Protect the Community Through Community's Capability to Mitigate Hazards and Reduce Exposure to Hazard Related Losses

Objective 3.1: Reduce damage to property from an earthquake event.

Objective 3.1.1: Adopt/maintain building codes to meet required earthquake standards.

Objective 3.1.2: Provide the public with information on how to be prepared for a seismic event, and minimize any related damage or threat to health and public safety.

Objective 3.2: Use open space easements and other regulatory techniques to prohibit development and avoid creating public safety hazards where geologic instability is identified and cannot be mitigated.

Objective 3.3: Increase awareness of Mobile Home Owners of the need to retrofit homes through the use of foundation strapping.

Objective 3.4: Increase awareness of non-structural retrofitting through water heater strapping, gas shut off valves, etc.

Objective 3.5: Coordinate efforts between public safety, building officials, city communication staff and others to create innovative public awareness programs.

Objective 3.6: Identify local hazard mitigation projects for inclusion in Capital Improvement Plan (CIP).

Goal 4: Protect the community from flood and storm related losses.

Objective 4.1: Identify existing facilities located in the one-hundred-year floodplain, flood inundation areas and known debris flow areas particularly bridges and potential emergency access routes.

Objective 4.2: Provide for better collection of real time data related to severe weather events.

Objective 4.3: Reduce localized flooding within the City's storm drain systems.

Objective 4.3.1: Implement better drainage to accommodate heavy rains that cause flooding.

Objective 4.4: Encourage flood control techniques along the Santa Ana River that are harmonious with potential recreational uses in the area

Objective 4.5: Identify local hazard mitigation projects for inclusion in Capital Improvement Plan (CIP).

Goal 5: Protect the community from hazards related to air, rail, and ground transportation.

Objective 5.1: Minimize the risk of potential hazards associated with aircraft operations at the Riverside Municipal Airport, March Air Reserve Base/March Inland Port and Flabob Airport through the adoption and implementation of the Airport Protection Overlay Zone and the Riverside County Airport Land Use Compatibility Plan.

Objective 5.2: Ensure compatible land uses near March Air Reserve Base/March Inland Port through participation of staff and elected officials in the adoption of the March Joint Land Use Study and the Riverside County Airport Land Use Compatibility Plan.

Objective 5.3: Pursue grade-separated rail crossings as the first level priority for reducing street/rail conflicts

Objective 5.4: Use technology to improve safety at grade crossings that cause the least environmental harm (e.g., automated horn systems).

Objective 5.5: Identify local hazard mitigation projects for inclusion in Capital Improvement Plan (CIP).

GOAL 6: Protect the community from hazards related to wildland fires.

Objective 6.1: Mitigate existing fire hazards related to urban development, infrastructure, parks and open space.

Objective 6.2: Evaluate all new development to be located in or adjacent to wildland areas to assess its vulnerability to fire and its potential as a source of fire risk.

Objective 6.3: Integrate fire safety considerations in the planning process.

Objective 6.4: Continue to implement stringent brush-clearance requirements in areas subject to wildland fire hazards.

Objective 6.5: Identify local hazard mitigation projects for inclusion in Capital Improvement Plan (CIP).

Goal 7: Maintain coordination of disaster planning

Objective 7.1: Coordinate with changing CalOES/DHS/FEMA regulations and requirements.

Objective 7.1.1: Maintain SEMS (Standardized Emergency Management System) and NIMS (National Incident Management System) training for City personnel.

Objective 7.1.2: Maintain continued Disaster Mitigation Act (DMA) planning.

Objective 7.2: Develop and maintain Emergency Operations and other City-Community plans such as the General Plan, Safety Element, Utilities Plan, etc.

Objective 7.3: Maintain effective, coordinated and up-to-date community-wide emergency response strategies and procedures with allied and cooperating agencies.

Objective 7.4: Ensure that equipment and structures designed to provide emergency disaster services are located and designed to function after a disaster or emergency event, or relocate any such structures which are not adequate to provide emergency services.

Objective 7.5: Identify actions to reduce the severity and probability of hazardous occurrences.

Objective 7.6: Reduce the risk to the community from hazards related to geologic conditions, seismic activity, flooding and structural and wildland fires by requiring feasible mitigation of such impacts on discretionary development projects.

Objective 7.7: Identify local hazard mitigation for inclusion in Capital Improvement Plan (CIP).

7.2 MITIGATION ACTIONS

See section 3.5, 7.3, 7.4 and Appendix C Capital Improvement Plan (CIP) for past mitigation, ongoing mitigation and proposed future mitigation actions. Below are Mitigation Strategies for the top ten hazards Riverside faces. Additional Mitigation Strategies that may affect the City and its hazards are included in the Riverside County OA MJHMP Section 4.3.2 and Riverside CIP.

7.3 ON-GOING MITIGATION STRATEGY PROGRAMS

1. Increase Water-Saving Measures Awareness

Issue/Background: The City of Riverside has taken steps to improve our water supply and increase water conservation through education and a highly successful incentive program. Riverside Public Utility's incentives through its Green Riverside program include rebates to replace lawns with artificial turf, installation of Weather Based Irrigation Controllers, high efficiency toilets and clothes washers and through free low-flow sprinkler nozzles. The Green

Riverside program participates in community events and has a strong web and social media presence to provide education and awareness regarding water conservation.

Other Alternatives: None.

Responsible Office: Riverside Public Utilities – Water Conservation Coordinator

Priority: High

Cost Estimate: Based on yearly funding.

Potential Funding:

City Funding

Conservation Surcharge

Benefits: Through these voluntary conservation and incentive programs Riverside Public Utility customers have saved more than 782 million gallons per year. Increased awareness of these programs will increase water savings and improve the water supply for all.

Schedule: Water conservation is an on-going strategy as populations increase and water supplies fluctuate due to changing climates year-to-year.

2. Tree Trimming Program

Issue/Background: The City of Riverside has taken steps to mitigate losses associated with falling trees and branches through the use of its Tree Trimming program.

Other Alternatives: None.

Responsible Office: Riverside Public Works – Urban Forester

Priority: High

Cost Estimate: Based on yearly funding and Measure Z.

Potential Funding:

City Funding

Measure Z

Benefits: Tree trimming will allow for less debris clean up post windstorm and flood. Trimming make trees healthier.

Schedule: Tree trimming is an on-going strategy.

3. Cool Center/Warming Center Program

Issue/Background: In partnership with Riverside County Community Action Partnership the City of Riverside participates in the Cool Center program. The City may activate a Cool Center/Warm Center to provide drop-in sites for vulnerable individuals, seniors, the disable and others in need of temporary relief from extreme heat or winter cold.

Other Alternatives: None.

Responsible Office: Riverside Parks, Recreation and Community Service

Priority: High

Cost Estimate: Staff time during activation of a center.

Potential Funding:

City Funding

Benefits: Provide an area of refuge to get out of the extreme heat or winter cold.

Schedule: Year round. Centers may be operated either as Cooling Centers in the summer or Warming Centers in the winter.

4. Terrorism

Issue/Background: The Riverside Urban Area Security Initiative (UASI) provides terrorism related classes for law enforcement and first responders.

Other Alternatives: None.

Responsible Office: Riverside Fire Department Office of Emergency Management – Urban Area Security Initiative

Priority: High

Cost Estimate: Based on funding from UASI

Potential Funding:

Homeland Security Grant Program

Benefits: Program will continuously educate and train personnel on new skills and improve abilities.

Schedule: On-going. Classes are funded each year through the UASI Homeland Security Grant Program.

For additional strategies, please refer to section 7.4 listed below and to the Riverside County Multi-Jurisdictional Hazard Mitigation Plan.

7.4 FUTURE MITIGATION STRATEGIES

1. Hunter Substation Seismic Upgrade/Retrofit

Issue/Background: Hunter Substation, located at 1731 Marlborough Avenue was originally constructed in 1960 and expanded in 1986. A structural analysis in 2013 determined that the 1960 portion of the substation is likely to fail during a seismic event and cannot be reinforced or braced. The three northern bays in the 69kV substation bus structure must be removed and replaced along with their related equipment.

Other Alternatives: None.

Responsible Office: Riverside Public Utilities / Energy Delivery Division

Priority: Low

Cost Estimate: $9,000,000

Potential Funding:

Capital Improvement Plan

Hazard Mitigation Grant Program

Benefits: In the event of a major earthquake, Hunter Substation would be severely damaged, interrupting electric service to essential emergency services and over 5,000 customers

Schedule: Design-Build RFP to be developed and issued within six months. Design and construction phases are anticipated to take two and a half to five years.

2. Techite Pipe Replacement

Issue/Background: Replacement of segments of 27-, 36-, and 42-inch diameter Techite pipe (reinforced fiberglass pipe) which were installed in the late 1970s to early 1980s. Techite pipe

is fragile and prone to rupture catastrophically when put under external stress (i.e. seismic event).

Ideas for Integration: Pipeline comprises the 'Crosstown Feeder' transmission main and based on future demand and growth projections, will need to be upsized to meet the future 80,000+ MGD demand scenario. Upsizing can be integrated with Techite replacement.

Other Alternatives: None.

Responsible Office: Riverside Public Utilities / Water Engineering

Priority: High

Cost Estimate: $27,000,000

Potential Funding:

Bond funding; State Revolving Funds (low interest loan)

Hazard Mitigation Grant Program

Benefits: Replacement of the existing Techite Pipe will improve system reliability by reducing the potential for catastrophic pipeline failure. Upsizing of current pipe will provide adequate capacity to meet projected future growth demands.

Schedule: 10 years (2017-2027)

3. Evaluation of the city's drinking water system

Issue/Background: There has not been a complete assessment of the City's entire water delivery system. This assessment would look at all the main water facilities to evaluate the vulnerability of the facilities to a large size seismic event in the region, rank each facility by criticality, and provide recommended system improvements and cost for each of the facilities. The study would detail the impact to the water system and to the residents served.

Other Alternatives: None.

Responsible Office: Riverside Public Utilities

Priority: High

Cost Estimate: $1,000,000

Potential Funding:

Drinking Water State Revolving Fund

Hazard Mitigation Grant Program

Pre-Disaster Mitigation Grant

City Funding

Benefits: The review of the drinking water delivery will provide the City with a better understanding of the potential risks of a loss of drinking water as a result of a large scale earthquake. The assessment of system's vulnerability will assist the City in ranking the facilities by criticality and provides recommended system improvement by facility with cost estimates.

Schedule: Ongoing

4. Riverside Transmission Reliability Project

Issue/Background: Currently, the only source of the City's imported energy for its customers comes through Edison's Vista Substation, located in the City of Grand Terrace. Because the Vista Substation is the only source of imported power for the City, any loss of supply at that substation would greatly affect RPU's ability to serve its customers. The proposed Project would provide a second point of delivery for electricity, reducing dependence on the existing Vista Substation and providing the capacity and reliability needed to support recent and future growth in the area. An additional substation also provides greater flexibility for future expansion of the electrical system, as needed.

Other Alternatives: The City to build additional power generating stations within the City. This is not likely due to severe constraints in obtaining air quality permits for conventional natural gas fired generation and the limited capacity of renewable generation resources.

Responsible Office: Riverside Public Utilities

Priority: High

Cost Estimate: $185,000,000

Potential Funding:

Joint City and Edison Funding

Benefits: The project will provide a second method of delivering power to the City. This second method will help insure that should there be a loss of the primary source, that electrical power will still be available to the City.

Schedule: Ongoing, projected completion 2024

5. Museum Retrofit

Issue/Background: The Riverside Metropolitan Museum received into its collection the Harada House in 2004. Shortly after in 2005 the Harada House was heavily impacted by a severe storm, DR-1577. The National Park Service has placed the Harada House on its National Historic Landmark Threatened List due to the Houses fragile condition. The Harada House is among the most significant civil rights landmarks in California. It helps tell the story of the Harada family from the passage of the 1913 California Alien Land Law and their fight to keep their home to the family's interment in Japanese Internment Camps. The proposed project would develop engineering specifications for seismic stabilization and site drainage.

Other Alternatives: None.

Responsible Office: Riverside Metropolitan Museum

Priority: High

Cost Estimate:

Consultant's Evaluation: $50,000

Retrofit Design Cost: $20,000

Estimated Project Cost: $225,000

Potential Funding:

Pre-Disaster Mitigation Grant

Hazard Mitigation Grant Program

California Cultural & Historical Endowment Planning Grant

Charitable Foundations

Benefits: Preservation of the Harada House will allow the story of this important civil rights history to continue to be accessible to future generations.

Schedule: Immediate

6. Increase Flood Awareness

Issue/Background: The City of Riverside has experienced four Major Disaster Declarations in the past ten years and had numerous severe storms that have led to flooding. Outreach to residents at community events such as health and safety fairs to increase awareness of the NFIP and educate residents on flood risks is extremely important.

Other Alternatives: None.

Responsible Office: Riverside Fire Department Office of Emergency Management Community Preparedness Coordinator

Priority: High

Cost Estimate: City Personnel Time Only

Potential Funding:

City Funding

Benefits: Increases flood awareness and flooding preparedness among Riverside residents. Encouraging residents to purchase flood insurance can help lessen the impact if flooding does occur.

Schedule: On-going

7. Increase Wildfire Risk Awareness

Issue/Background: With hills and a riverbottom that are constantly at risk of wildland fires the City of Riverside is always at risk of Wildland Urban Interface fires. The outlook of a continued drought only enhances that risk. The City currently provides on our website fire hazard risk maps to help inform the public of the risks we face. We also participate in the highly successful Ready! Set! Go! program by passing out the Ready! Set! Go! information at outreach events throughout the city and on our social media sites. With additional funds we could expand the outreach through a multi-platform media campaign through a PSA on TV, billboards near fire hazard zones and targeted mailings to residents informing them of the hazards and providing a Ready! Set! Go! handout providing them with detailed information on how they can mitigate wildland fire hazards on their property as well as be prepared if fire strikes in the Wildland Urban Interface.

Other Alternatives: None.

Responsible Office: Riverside Fire Department

Priority: High

Cost Estimate: $70,000

Potential Funding:

City Funding

Pre-disaster Mitigation Grant

Benefits: Increases residents' awareness of wildland fire risk and how they can mitigate their property to reduce that risk. Residents will also be better prepared if a fire does threaten their home and neighborhood.

Schedule: Immediate

8. Raise levee between WQCP and Santa Ana River

Issue/Background: Required by permit

Other Alternatives: None.

Responsible Office: City of Riverside Public Works

Priority:

Cost Estimate: $3.5 – 3.8 million

Potential Funding:

Benefits: Protect the treatment plant from Santa Ana River flooding.

Schedule: Spring 2017 to August 2017

9. Clear Water Generating Station Flood Prevention

Issue/Background: Clearwater Generating Station at 2205 Railroad Street in Corona California is located in Zone AE and X of FEMA FIRM 06065C0688G. Clearwater generating Station provides electric and steam service to the adjacent wastewater treatment facility. The project would engage a consultant to survey the site and perform a hydrologic study to determine the probable flood water elevation during a 100 year and 500 year flooding event. The flood water elevations would be compared to the generating station equipment elevations to determine if mitigation is necessary and feasible. If mitigation is required, the consultant would prepare bid documents and budget estimates for a follow on construction project to implement the most cost effective mitigation measures. Flood mitigation

construction may include raising critical components, installation of flood walls and flood gates, dewatering equipment or other measures.

Other Alternatives: None.

Responsible Office: City of Riverside Public Utilities/Energy Delivery Division

Partners: Riverside Public Utilities/Power Resources Division and City of Corona

Priority: Low – Clearwater Generating Station is located within the bounds of the 100 and 500 year flood plains, indicating a 1% to 0.2% probability of occurrence on an annual basis. The Army Corps of Engineers has recently completed a project to raise the nearby Prado Dam on the Santa Ana River and has modified flood control features the at site, which may have resolved flooding concerns.

Cost Estimate: $50,000 for consulting study

Potential Funding:

Capital Improvements Plan

Hazard Mitigation Grant Program

Benefits: In the event of flooding the generating station would be flooded causing extensive damage to electrical equipment and interrupting electric service to essential emergency services at the adjacent wastewater treatment plant.

Schedule: Initial Consulting study to be completed within 12 months. Follow on project, if necessary would be scheduled the following year.

10. Freeman Substation Flood Prevention

Issue/Background: Freeman Substation at 3301 Gibson Street in Riverside California is located in Zone X of FEMA FIRM 06065C0720G. Freeman Substation is also located in the inundation area for a failure of the Mockingbird Canyon Dam. Freeman Substation provides electric service to over 16,000 customers, including essential emergency services: Parkview Hospital, Fire Station 10, Riverside County Mental Health, Lincoln Police Station, Utilities Operations Center, California Highway Patrol, Juvenile Hall, and the Corporation Yard. The project would engage a consultant to survey the site and perform a hydrologic study to determine the probable flood water elevation during a 100 year and 500 year flooding event or for a failure of Mockingbird Canyon dam. The flood water elevations would be compared to the high voltage substation equipment elevations to determine if mitigation is necessary and feasible. If mitigation is required, the consultant would prepare bid documents and

budget estimates for a follow on construction project to implement the most cost effective mitigation measures. Flood mitigation construction may include raising critical components, installation of flood walls and flood gates, dewatering equipment or other measures.

Other Alternatives: None.

Responsible Office: City of Riverside Public Utilities/Energy Delivery Division

Priority: Low – Freeman Substation is located within the bounds of the 100 and 500 year flood plains, indicating a 1% to 0.2% probability of occurrence on an annual basis. The Mockingbird Canyon dam is operated and maintained by Riverside Public Utilities Water Division and has a very low probability of failure

Cost Estimate: $50,000 for consulting study

Potential Funding:

Capital Improvements Plan

Hazard Mitigation Grant Program

Benefits: In the event of flooding the generating station would be flooded causing extensive damage to electrical equipment and interrupting electric service to essential emergency services at the adjacent wastewater treatment plant.

Schedule: Initial Consulting study to be completed within 12 months. Follow on project, if necessary would be scheduled the following year.

11. Kaiser Substation Flood Prevention

Issue/Background: Kaiser Substation at 10800 Magnolia Avenue in Riverside California is located in Zone X of FEMA FIRM 06065C0716G. Kaiser Substation is also located in the inundation area for a failure of the Mockingbird Canyon Dam. Kaiser Substation provides electric service to Kaiser Hospital. The project would engage a consultant to survey the site and perform a hydrologic study to determine the probable flood water elevation during a 100 year and 500 year flooding event or for a failure of Mockingbird Canyon dam. The flood water elevations would be compared to the high voltage substation equipment elevations to determine if mitigation is necessary and feasible. If mitigation is required, the consultant would prepare bid documents and budget estimates for a follow on construction project to implement the most cost effective mitigation measures. Flood mitigation construction may include raising critical components, installation of flood walls and flood gates, dewatering equipment or other measures.

Other Alternatives: None.

Responsible Office: City of Riverside Public Utilities/Energy Delivery Division

Priority: Low – Kaiser Substation is located within the bounds of the 100 and 500 year flood plains, indicating a 1% to 0.2% probability of occurrence on an annual basis. The Mockingbird Canyon dam is operated and maintained by Riverside Public Utilities Water Division and has a very low probability of failure

Cost Estimate: $50,000 for consulting study

Potential Funding:

Capital Improvements Plan

Hazard Mitigation Grant Program

Benefits: In the event of flooding or Mockingbird Canyon dam failure, the substation would be flooded causing extensive damage to electrical equipment and interrupting electric service to essential emergency services at Kaiser Hospital.

Schedule: Initial Consulting study to be completed within 12 months. Follow on project, if necessary would be scheduled the following year.

12. Utility Operations Center Flood Prevention

Issue/Background: Utilities Operations Center (UOC) at 2911 Adams Street in Riverside California is located in Zone X of FEMA FIRM 06065C0720G. The UOC is also located in the inundation area for a failure of the Mockingbird Canyon Dam. The UOC contains the utility control center for the Riverside Public Utilities water and electric systems as well as fiber optic and radio communications systems. The UOC is RPU's sole reporting and dispatch location for water and electric crews and serves at the Department Operating Center. The project would engage a consultant to survey the site and perform a hydrologic study to determine the probable flood water elevation during a 100 year and 500 year flooding event or for a failure of Mockingbird Canyon dam. The flood water elevations would be compared to the UOC's equipment elevations to determine if mitigation is necessary and feasible. If mitigation is required, the consultant would prepare bid documents and budget estimates for a follow on construction project to implement the most cost effective mitigation measures. Flood mitigation construction may include raising critical components, installation of flood walls and flood gates, dewatering equipment or other measures.

Other Alternatives: None.

Responsible Office: Riverside Public Utilities/Energy Delivery Division

Partners: Riverside Public Utilities/Water Division

Priority: Low – UOC is located within the bounds of the 100 and 500 year flood plains, indicating a 1% to 0.2% probability of occurrence on an annual basis. The Mockingbird Canyon dam is operated and maintained by Riverside Public Utilities Water Division and has a very low probability of failure

Cost Estimate: $50,000 for consulting study

Potential Funding:

Capital Improvements Plan

Hazard Mitigation Grant Program

Benefits: In the event of flooding or Mockingbird Canyon dam failure, the UOC would be flooded causing extensive damage to water and electric system control equipment and disrupting fiber optic and radio communications systems. Electric and water crew operations would be disrupted until relocated to an alternate site.

Schedule: Initial Consulting study to be completed within 12 months. Follow on project, if necessary would be scheduled the following year.

13. Retrofit of Critical Rail and Street Infrastructure

Issue/Background: The City is trisected by two major intercontinental rail lines carrying over 130 trains per day. While the City has completed 6 rail/Highway grade separations over the past few years to improve emergency response for the City's Police, Fire and Ambulance service, additional grade separations are needed. High on the priority list is construction of a grade separation along the BNSF Rail line to near the City's Corporation yard/Lincoln Police Station and the City's downtown and residential area to improve emergency response during any event that results in trains blocking the street crossing.

Responsible Office: Riverside Department of Public Works

Priority: High

Cost Estimate: $35 Million

Potential Funding:

State and Federal Grants

Local Transportation Funds

Benefits: Provides for an improved emergency response. Will reduce traffic congestion, reduction in vehicle emissions and mitigates at-grade rail incidents.

Schedule: Within 4 years of securing funding.

For additional strategies that may have an affect on the City of Riverside, please refer to the Riverside County Multi-Jurisdictional Hazard Mitigation Plan.

SECTION 8.0 - PLAN IMPLEMENTATION AND MAINTENANCE PROCESS

8.1 MONITORING, EVALUATING AND UPDATING PLAN

The LHMP is a living document that reflects the City's ongoing hazard mitigation activities. The process of monitoring, evaluating, and updating the Plan will be critical to the effectiveness of hazard mitigation. The Emergency Services Coordinator with the City's Office of Emergency Management is responsible for maintaining, evaluating, and updating the Plan. The Plan will be reviewed annually and updated every five years as required. The plan will also be reviewed as part of the normal review and update of the City's General Plan and Safety Element. Recommendation for Plan revisions will be based on the following criteria:

- Changes in federal or state laws
- Accomplishment of Actions, Objectives and Goals
- Advances in knowledge or understanding of hazards.
- Additional hazard events, including federally declared disasters.
- Changes in the City's risk to the identified and/or additional hazards
- Performance of mitigation projects during hazard events.

The Local Hazard Mitigation Planning Team (HMPT) will convene annually to review the progress made towards the Plan's goals and objectives. The HMPT will review each goal and objective to determine their relevance to changing situations in the City, as well as changes in state or federal policy and laws to ensure that the Plan is addressing current and expected conditions. The HMPT will also review the risk assessment section of the Plan to determine if this information should be updated or modified. The parties responsible for the various implementation actions will report on the status of their projects and will include which implementation processes worked well, any difficulties encountered, how coordination efforts were proceeding, and which strategies should be revised.

SECTION 9.0 - INCORPORATION INTO EXISTING PLANNING MECHANISMS

The Local Hazard Mitigation Plan and related strategies have been incorporated into the following City of Riverside Plans. During the planning process for new and updated local planning documents the LHMP will be used to ensure consistency with the hazard mitigation goals and strategies across the plans. (See Section 6.5)

1. CITY OF RIVERSIDE GENERAL PLAN

The City's General Plan provides objectives and policies that guide land use and development decisions as well as help shape the priorities of the city.

Name: Riverside General Plan 2025

Last Update: Element Amended October 2017

Next Update: Plan, Elements and Implementation Plan are reviewed annually

Major portions of the plan include:

- Land Use and Urban Design Element – Amended March 2013
- Circulation and Community Mobility Element – Amended November 2012
- Housing Element – Amended October 2017
- Arts and Culture Element – Adopted November 2007
- Education Element – Adopted November 2007
- Public Safety Element – Amended November 2012
    - Objective PS-1 - Minimize the potential damage to existing and new structures and loss of life that may result from geologic and seismic hazards
    - Objective PS-6 - Protect Property in Urbanized and Un-urbanized areas from fire hazards
    - Objective PS-2 - Guarding Against Flooding and Dam Inundation
- Noise Element – Adopted November 2007
- Open Space and Conservation Element – Amended November 2012
- Air Quality Element – Adopted November 2007
- Public Facilities & Infrastructure Element – Amended November 2012
- Park and Recreation Element – Amended November 2012
- Historic Preservation Element – Amended November 2012

Adopted: November 2007

2. Building and Safety – Adopted November 27, 2013

Name: Uniform Building, Mechanical and Plumbing and National Electrical Codes

Used to enforce safe structural standards and to reduce damages from earthquakes and other building hazards.

3. Fire Code – Adopted January 7, 2014

   Name: 2013 California Fire Code

   The Fire Code seeks to safeguard of life and property from the hazards of fire and explosion arising from the storage, handling and use of hazardous substances, materials and devices and from conditions hazardous to life or property in the use or occupancy of buildings or premises.

4. Riverside Municipal Code 6.15.020 – Adopted January 3, 2006

   The Riverside Municipal Code reduces risk to property from wildland fire through the enforcement of weed abatement inspections and fines.

5. CAPITAL IMPROVEMENT PLAN

   The City's Capital Improvement Program (CIP) is a multi-year planning instrument that drives the evaluation and identification of capital infrastructure projects in need of renovation, repair and/or construction.

   Name: Capital Improvement Program FY 2016-2021

   Last Update: August 31, 2016

6. Emergency Operations Plan

   The Emergency Operations Plan (EOP) provides strategic guidance for response and recovery to a full range of emergencies and disasters. The EOP is both a preparedness and response document.

   Name: City of Riverside Emergency Operations Plan, Part I: Base Plan

   Adopted: January 18, 2011 by Resolution No. 22151

   Last Update: Under Revision 2017

7. Hazardous Materials Area Plan

   The Area Plan was developed to be used in conjunction with the EOP and LHMP. It helps prepare and respond to hazardous materials incidents.

   Last Updated: June 13, 2014

Next Update: June 13, 2017

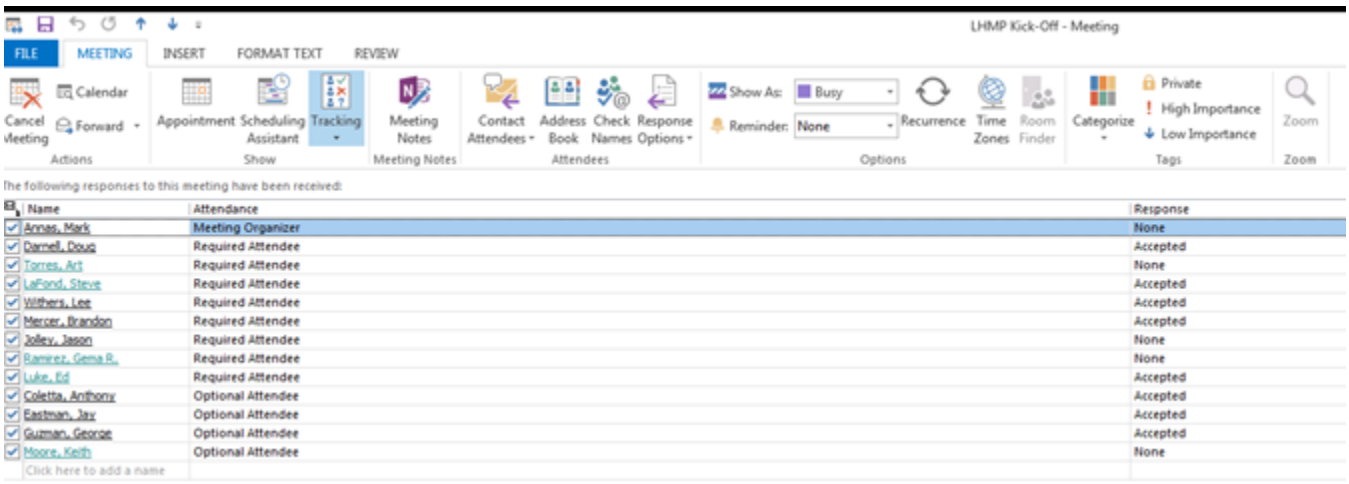
8. Other plans and policies outlined in capability assessments (SEE SECTION 6.1)
9. City Ordinances

SECTION 10.0 - CONTINUED PUBLIC INVOLVEMENT

The City of Riverside is dedicated to involving the public directly in the continual reshaping and updating of the Hazard Mitigation Plan. The HMPT members will be responsible for the annual review and update of the Plan. The five-year update will incorporate at least one thirty day public comment period to allow public involvement, input, and feedback about the Plan.

APPENDIX A – PUBLIC NOTICES AND MAPS

LHMP Meeting #1 – November 4, 2015



RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan Meeting #2
Thursday November 19, 2015
Riverside EOC Conference Room

Name	Area of Assignment	Department / Division	Phone#
Mark Annas	OEM - EOC	Fire / OEM	951-320-8103
Carol Crouch	Account Clerk	RFD / OEM	951-320-8127
Jason Jolley	PW	PW	951-351-618[illegible]
DOUG DARNELL	PLANNING DIVISION CEDD	CEDD	951-826-5219
Lee Withers	Parks	Parks	951-351-6084
George Gorman	LIBRARY	LIB	951-826-5373
Steve Lafond	PW	PW/ENERGY DELIVERY	951-826-240[illegible]
Barton Mercer	City Attorney	City Attorney	951 826 5567
Ed Luker	Bldg Services	Bldg Services	951 712-676[illegible]

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan Meeting #3
Wednesday December 16, 2015 10:00 – 11:30 a.m.
Riverside EOC Conference Room

Name	Area of Assignment	Department / Division	Phone#
[illegible]	EOC	Fire/OEM	951-820-8103
ANTHONY COLETTA	RIV OEM	" "	951-320-8164
Lee Withers		Parks	951-351-6084
Sherry Morton		City Clerk	951 826 5557
Brandon Mercer	CAO	CAO	951 826 5567
Stephen E. Lafond	Public Utilities	Public Utilities	951 926 2402
A. TORRES	Finance		5564
DOUG DAHNKEN	CDD	CDD/PLANNING	951-826-5219

LHMP Meeting #4

EOC SIGN IN LOG

ALL STAFF, DEPARTMENT, CONTRACTORS & VENDORS MUST SIGN IN & SIGN OUT

DATE	NAME	DEPARTMENT/DIVISION/ COMPANY NAME	PURPOSE / DESTINATION	TIME IN	TIME OUT
1/20/16	Mark Annas	Fire-OEM	LHMP		
1/20/16	DOUG DANNELL	COMMUNITY ECON. DEV.	LHMP		
1/20/2016	STEVE LAFOND	RPU-ENERGY DELIVERY	LHMP	1306	
1/20/16	Gema Ramirez	Museum	LHMP		
1/20/16	Jason Jolley	PW	LHMP		

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan Meeting #5
Wednesday February 17, 2016 10:00 – 11:30 a.m.
Riverside EOC Conference Room

Name	Area of Assignment	Department / Division	Phone#
Mark Amos	Planning	OEM	
Lee Withers	Parks	PRCSD / Parks	351-6084
Anthony Galizia		OEM	
Steve Lafond	RPU	Public Utilities/Elect	(951) 826-2402
TORRES	FINANCE		5564
DOUG DARNELL	CDD - PLANNING	CDD - PLANNING	826-5219

LHMP Meeting #6

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan Meeting #6
Wednesday March 23, 2016 10:00 – 11:30 a.m.
Riverside EOC Conference Room

Name	Area of Assignment	Department / Division	Phone#
Mark Hanna	Planning / EOC	OEM	951-320-8105
Brandon Nuckey	CAO		951-826-5585
Jason Jolley	PW		951-351-6187
Joseph McDowell	FIRE BC	FM / OPS rep	9512339875
Anthony Coleizzo	Intelligence	OEM	
DOUG DANNELL	CEDD/Planning		951-826-5219
Greg Torres	Planning		5566

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan Meeting #7
Wednesday April 6, 2016 10:00 – 11:30 a.m.
Riverside EOC Conference Room

Name	Area of Assignment	Department / Division	Phone#
Mark Annas	EOC	Fire / OEM	951-320-8103
ANTHONY COLETTA	OEM	OEM	
George Guzman	Lib	Lib.	915 826-5219
STEVE LAFOND	PU	PU / ENERGY DELIVERY	951-826-2402
DOUG DARNELL	C&EDD	CEDD / PLANNING	951-826-5219
Arturo Torres	Finance	RISK	5564

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan Meeting #8
Wednesday May 11, 2016 10:00 – 11:30 a.m.
Riverside EOC Conference Room

Name	Area of Assignment	Department / Division	Phone#
Mark Amas	EOC	Fire / OEM	x8103
Brandon Meyer	EOC	CAO	ext 5169
Steve Lafond	Public Utilities	Energy Delivery	(951) 826-2402
Sherry Morton	City Clerk	City Clerk / Admin	4280 or 5557
DOUG DARNELL	COMMUNITY & ECON. DEVELOPMENT	C&EDD / PLANNING	951-826-5219
Jennifer McDowell	CITY HALL FIRE DEPT.	PREVENTION	951 233-9875
ARTURO TORRES	FINANCE	Risk Mgmt.	5564
Lee Withers	Parks	PRCSD / Parks	(951) 351-6084
Jason Jolley	PW	PW	(951) 351-6187

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan Meeting #9
Wednesday June 8, 2016 10:00 – 11:30 a.m.
Riverside EOC Conference Room

Name	Area of Assignment	Department / Division	Phone#
Mark Annas	EOC	Fire - OEM	x8103
George Guzman	Lib		
Jennifer McDowell	Fire Prevention	Fire	

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan Meeting #~~9~~ 10
Wednesday May 24, 2017 1:00 – 1:30 p.m.
Riverside EOC Conference Room

Name	Area of Assignment	Department / Division	Phone#
Mark Annes	EOC	OEM	8155
Peter Sellas	EOC	OEM	8104
Brandon Mercer	CAO	CAO	5169
Sarah Powers	LHMP	Riv. Co. EMD	951 358 7194
Steve Lafond	Riverside Public Utilities		951 826-2402
Jennifer McDowell	Fire Prev.	FM	951-602 0816

IE Business Daily Article – January 26, 2016

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IE Business Daily

DON'T MISS Wholesale Capital Corporation to do Major Events in September

Home > City / County News > Public Asked to Identify Most Serious Hazards

Public Asked to Identify Most Serious Hazards

By Inland Empire Business Daily on January 16, 2016

SHARE TWEET SHARE SHARE 0 COMMENTS

Riverside is asking residents and businesses to list the hazards, both natural and man-made, that most concern them.

The survey, which began Monday and will take one month to complete, is part of Riverside's effort to update its Local Hazard Mitigation Plan, said Mark Annas, Riverside's emergency operations coordinator.

Twenty five hazards, including earthquakes, floods, wilderness fires, cybersecurity and power outages, are listed on the survey, which can be accessed at riversideca.gov/fire/oem/hazard.asp.

The survey is also available at the Riverside Public Library and at the community meetings the city is holding to publicize the program.

The plan is updated every five years. Wherever possible, it identifies ways to avoid or lessen the fallout from various disasters.

Respondents are asked to rank the hazards from most to least important and to list the risks associated with each of them. City officials will use the data to help map out response strategies and to obtain grants from the Department of Homeland Security and the Federal Emergency Management Agency, Annas said.

City / County news featured

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Press Enterprise Article – January 26, 2016

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NEWS
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NEWS
CORONA: City cracks down on illicit massage parlors

NEWS
SAN BERNARDINO: Deputy at fault in traffic collision, CHP report says

SPORTS
TENNIS: Serena returns to Indian Wells, and she has company

NEWS

RIVERSIDE: Survey seeks input on hazards

City wants to know people's concerns about earthquakes, fires and other hazards, how they've prepared.

G+1 Like Share Tweet Email Share

By ALICIA ROBINSON / STAFF WRITER
Published: Jan. 26, 2016 5:14 p.m.

, DAVID BAUMAN, FILE PHOTO

Riverside is asking for residents' and businesses' feedback on a survey about hazards to the community such as floods and wildfires and how to address them.

The "Local Hazard Mitigation Survey" must be updated every five years and makes the city eligible for federal funds to prepare for future disasters.

The survey asks how concerned people are about hazards including earthquakes, power outages and terrorist attacks, what steps they've taken to prepare and how they get information about disaster preparation.

The results will help the city update its disaster plans and better plan public outreach about preparedness, city Emergency Operations Coordinator Mark Annas said. The survey is available through Feb. 11 online at www.riversideca.gov/fire/oem/hazard.asp or on paper at the Riverside main library, 3581 Mission Inn Ave.

Contact the writer: 951-368-9461 or arobinson@pe.com

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LA PRENSA
The Inland Empire's Spanish Language Newspaper
Southern CA Spanish News

Today's Poll What's this?

Press Enterprise Article – January 28, 2016

Inland preps for next round of heavy rainfall

Precipitation is most likely from late Sunday to early Monday, forecasters say.

By ALEX GROVES
STAFF WRITER

El Niño is expected to make its return to the region over the weekend, delivering measurable rain in the inland valleys and a healthy dose of snow in the mountains, according to weather officials.

Multiple El Niño-driven storms – the winter weather phenomenon that brings large amounts of precipitation – are predicted through early spring, National Weather Service Meteorologist James Thomas said. This weekend's storm comes on the heels of an earlier January system that dumped copious amounts of snow in the mountains and caused flooding in some valley towns.

And, as the looming threat of another wet weekend closes in, various agencies are working to prepare and get others prepared.

Caltrans will ramp up the number of people who will be working over the weekend to deal with weather-related road hazards, agency spokeswoman Terri Kasinga said.

Caltrans-permitted snow chain installers will be available, for a fee, to h people in the mounta who need to put chains their tires, she said.

Kasinga added the ag cy will hold a press con rence at 10 a.m. Friday Highway 330 near Highla Avenue to discuss litteri and traffic congestion, a provide information snow play areas in mountains.

As Caltrans prepared deal with the difficulties

snow might bring, resorts remained enthusiastic about the possibility of another good month of business.

David Likins, president of Mammoth Resorts, the Arroyo Fairways mobile home park in Hemet on Wednesday to discuss such topics as cleaning out rain gutters, securing personal items and putting down sandbags with residents.

the Inland valleys, and 1 to 2 tains should expect traffic

TERRY PIERSON, FILE PHOTO

Big Bear with Snow Summit above it after heavy snow blanketed the San Bernardino Mountains on Jan. 7. The next storm is expected this weekend.

El Niño rain gauge

Comparison of the current El Niño year to El Niño years of the past, as measured at Riverside Municipal Airport.

Rainfall in inches: July 1-Jan. 27		*Total year rain
1997-98	7.2	21.53
2009-10	6.19	8.46
2015-16	7.19	N/A

* Total rainfall for July 1-June 30 season
Source: National Weather Service

STAFF GRAPHIC

INLAND VALLEY FORECAST

TODAY: Partly cloudy. Highs 73 to 78. Light winds.
FRIDAY: Highs 73 to 78. Light winds. Chance of showers in the evening.
SATURDAY: Rain likely. Highs 67 to 72.
SUNDAY: Rain likely. Highs 58 to 63.
MONDAY: Partly cloudy with a chance of showers. Breezy. Highs 56 to 61.
Source: National Weather Service

PARLORS

FROM PAGE 1

was not directly referencing Corona.

Once SB731 was enacted, the number of local massage parlors skyrocketed, said Corona police Sgt. Paul Mercado, who was part of the city's vice squad targeting gambling, narcotics and prostitution at the time the law was passed.

The state was handing out certifications like cra- zy," Mercado said.

At one point, there w 52 massage parlors in tov most along a half-m stretch of Sixth Street, j west of Grand Bouleva Mercado said. The cour does not keep data on number of massage bu nesses in the state.

There were loopholes the new law, too. Before latest Massage Thera Act took effect in 2015, council's guidelines for nying licensure w summed up in a few te guidelines, such as outl

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BRIEFLY

SURVEY SEEKS INPUT ON HAZARDS

RIVERSIDE • The city is asking for resident and business feedback on a survey about hazards to the community and how to address them.

The Local Hazard Mitigation Survey, which must be updated every five years, makes the city eligible for federal funds to prepare for disasters.

The survey asks how concerned people are about hazards including earthquakes, power outages and terrorist attacks, what steps they've taken to prepare and how they get information about disaster preparation.

The survey is available through Feb. 11 at **riverside ca.gov/fire/oem/hazard .asp** or at the Riverside main library, 3581 Mission Inn Ave.

– Alicia Robinson

FIRM PICKED FOR LEGAL-SPENDING PROBE

RIVERSIDE • The City Council has hired Hanson Bridgett, a Northern California law firm specializing in government ethics, to look into $19.4 million spent on outside attorneys from 2010 to 2014.

City Attorney Gary Geuss announced Tuesday that the council voted to hire the firm in a Jan. 12 closed session. Firm officials are expected to attend the March 1 council meeting to discuss the scope of the probe.

Council members raised questions last year about money spent on outside attorneys.

– Alicia Robinson

ACTIVIST ANNOUNCES RUN FOR MAYOR

MORENO VALLEY • Darrell Peeden, a Moreno Valley activist who has supported recalls against council members and is opposed to the Word Logistics Center warehouse complex, announced this week that he is running for mayor.

Peeden, 33, a vice president of a marketing firm, has created a campaign website outlining a 14-point plan that includes raising the minimum wage in Moreno Valley to $15 an hour. Among his priorities are combating the influence of big money in city politics, he said.

– Imran Ghori

THE PRESS-ENTERPRISE

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Letters to the editor
Email: letters@pe.com **Call:** 951-368-9408 **Fax:** 951-368-9021 **Mail:** 1825 Chicago Ave., Suite 100, Riverside CA 92507-2373

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Correction

Emmett "Frank" Jr. and Martha Pope have two children, seven grandchildren and two great-grandchildren. Because of a reporting error, the number of their grandchildren was incorrect in an anniversary announcement on Page 4 of the Local section in the Jan. 25 edition of The Press-Enterprise.

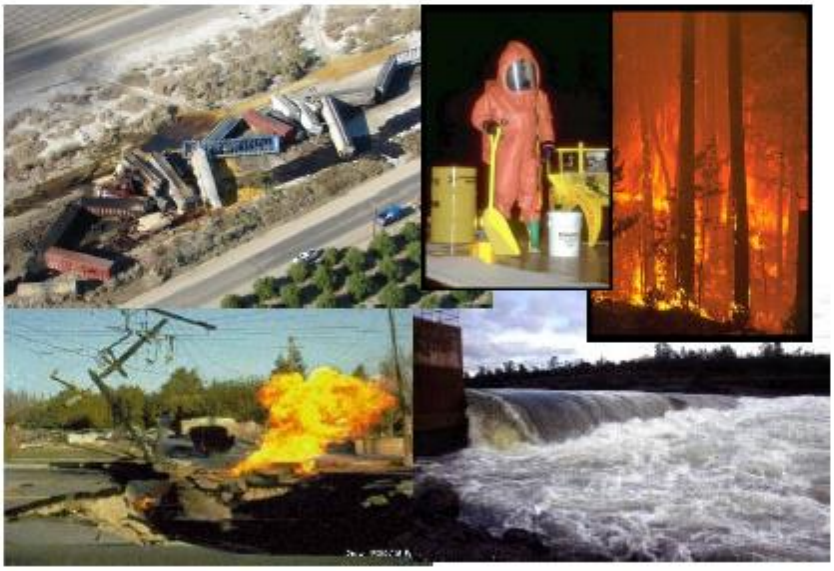
We will promptly correct factual errors. **Call** 951-368-9460 or **e-mail** corrections@pe.com. If you are still not satisfied, please write to the editor at P.O. Box 792, Riverside, CA 92502-0792.

Community Survey Flyer

CITY OF RIVERSIDE - LOCAL HAZARD MITIGATION PLAN COMMUNITY SURVEY

The City of Riverside is required to conduct an update to its Local Hazard Mitigation Plan every five years. As part of the update process, the community at large is asked to take part in a survey about the known local hazards. As part of the review, members of the community are asked to rank the hazards based on their probability of occurrence and their consequence impact on the City.

For more information on the City of Riverside – Local Hazard Mitigation Plan and to complete the Community Survey visit:
www.riversideca.gov/fire/oem/hazard.asp



Riverside Fire Department – Office of Emergency Management
(951) 320-8100

Email Blast Report

Page 1 of 517

Email Report

Custom List: August 2015 All Users

Jan 14, 2016
4:56 PM

Email

Address From: Mark Annas [LHMP@riversideca.gov]
Subject Text: Public Input Sought Through Local Hazard Mitigation Survey
Body Type: HTML
Body Text: Normal 0 false false false EN-US X-NONE X-NONE MicrosoftInternetExplorer4

The City of Riverside is conducting a survey seeking thepublic's input on hazards faced by local residents and businesses and ways toreduce the risks associated with those hazards.

The survey is part of the process to update the Local HazardMitigation Plan (LHMP). The plan, which is updated every five years, helpsidentify those local hazards and the risk associated with each hazard. Whereverpossible, the plan identifies steps, projects, policies and codes that help toavoid, reduce and mitigate disaster damages.

Public involvement is key, said Anthony Coletta, EmergencyServices Administrator. The feedback received from the public is what helpsdetermine where to focus the mitigation efforts to help reduce loss of life andproperty damage associated with a disaster.

The survey will be conducted online at the City of RiversideOffice of Emergency Management Local Hazard Mitigation Plan webpage -- https://www.riversideca.gov/fire/oem/hazard.asp.The survey also is available in hard copy at community meetings and at theRiverside Public Library.

Riverside community members are asked to take the surveyonline, mail it in or drop it off at a library.

City of Riverside - PRCSD
6927 Magnolia Ave.
Second Floor
Riverside, CA
92506

Emails to be attempted: 25279

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan – Public Outreach
Monday January 11, 2016 7:00 p.m.
Northside Improvement Association
Ruth Lewis Community Center
Reid Park, 701 N. Orange Street

Name (Please Print)	City of Riverside Resident (Please Circle)		Please list all that apply: Employed in, Business Owner, or Student in the City of Riverside
Steve Lafond	Y	N	Riverside Public Utilities employee
Mark Amas	Y	N	Employed
John (Mike) Madrill Sr	Y	N	RETIRED
Donald Reed	Y	N	retired
Nancy Hakala	Y	N	home owner + employed in Riverside
Vivian Foust	Y	N	home owner & employed in Riverside
Brian Mathieny	Y	N	home owner + Employed in Riv.
Vickie Perez	Y	N	RETIRED
Jeff Kraus	Y	N	UCR
Rita Madril	Y	N	home owner: housefinfo
Ron Courts	Y	N	Home Owner
	Y	N	

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan – Public Outreach
Monday January 11, 2016 7:00 p.m.
Northside Improvement Association
Ruth Lewis Community Center
Reid Park, 701 N. Orange Street

Name (Please Print)	City of Riverside Resident (Please Circle)		Please list all that apply: Employed in, Business Owner, or Student in the City of Riverside
Jackie Lippert	Y	N	Employ in
Dave Lippert	Y	N	Employed in
Charles Faust	Y	N	employed in
Peta Wohlgemuth	Y	N	Employed in
Victoria Kirst	Y	N	Stay at home mom / was employed in the
Jane Burkheimer	Y	N	Retired
	Y	N	
	Y	N	
	Y	N	
	Y	N	
	Y	N	
	Y	N	

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan – Public Outreach
Wednesday January 13, 2016 7:00 p.m.
Magnolia Area Neighborhood Alliance
Janet Goeske Senior Center
5257 Sierra Street

Name (Please Print)	City of Riverside Resident (Please Circle)		Please list all that apply: Employed in, Business Owner, or Student in the City of Riverside
Mike Soubirous	Y	N	Employed in, Business owner
Jane Adams	Y	N	Retired Resident
Doug Adams	Y	N	✓ ✓
Grace Adams	Y	N	✓ ✓
Linda Garrison	Y	N	" "
Stephanie McClain	Y	N	Home owner in Riverside
	Y	N	
	Y	N	
	Y	N	
	Y	N	
	Y	N	
	Y	N	

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan – Public Outreach
Wednesday January 13, 2016 7:00 p.m.
Magnolia Area Neighborhood Alliance
Janet Goeske Senior Center
5257 Sierra Street

Name (Please Print)	City of Riverside Resident (Please Circle)		Please list all that apply: Employed in, Business Owner, or Student in the City of Riverside
Norm Grifton	Y	N	Bus owner
Carolyn Weaver	Y	N	Riverside County Sheriff Dept.
DORIS WEAVER	Y	N	Riverside co
Phyllis Purcell	Y	N	Retirated
Raydele Sterling	Y	N	Family located here
Vivian Moreno	Y	N	
Irma Flores	Y	N	Resident
Ina Schweitzer	Y	N	Business / Home Owner
	Y	N	
	Y	N	
	Y	N	
	Y	N	

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan – Public Outreach
Wednesday January 13, 2016 6:30 p.m.
Lincoln Park Neighborhood Group
Lincoln Park Community Center
Lincoln Park, 4261 Park Avenue

Name (Please Print)	City of Riverside Resident (Please Circle)		Please list all that apply: Employed in, Business Owner, or Student in the City of Riverside
LaShon Halley	Y	N	City of Riverside
Valerie Espinoza	Y	N	City of Riverside, PRCSD
Socorro Huerta	Y	N	City of Riverside, PRCSD
George Alcala	Y	N	City of Riverside, PRCSD
Jessica Ochoa	Y	N	City of Riverside
Sylvia T. Villalpando	Y	N	County of R.V.
DAVID VILLALPANDO	Y	N	COMMUNITY MOBILE SYSTEM
Raul Martinez	Y	N	Retired
	Y	N	
	Y	N	
	Y	N	
	Y	N	

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan – Public Outreach
Wednesday January 13, 2016 7:00 p.m.
Community Action Group
Ysmael Villegas Community Center
Villegas Park, 3091 Esperanza Street

Name (Please Print)	City of Riverside Resident (Please Circle)		Please list all that apply: Employed in, Business Owner, or Student in the City of Riverside
Mark Annas	Y	N	Resident / Employed in Riverside
Christina Duran	Y	N	—
Bob Garcia	Y	N	Riverside
Charles Mendoza	Y	N	
Cheryl Hanslinger	Y	N	Employed
Morris Mendoza	Y	N	Retired
	Y	N	
	Y	N	
	Y	N	
	Y	N	
	Y	N	
	Y	N	

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan – Public Outreach
Thursday January 14, 2016 6:30 p.m.
University Neighborhood Meeting
Crest Community Church
3431 Mt. Vernon Avenue

Name (Please Print)	City of Riverside Resident (Please Circle)		Please list all that apply: Employed in	Business Owner	or Student in the City of Riverside	
Mark Annas	Y	N				
Steve Goodyear	Y	N				
Virginia Baker	Y	N				
Jeff & Suzanne Rice	Y	N				
Michael Huber	Y	N				
Tom Cain	Y	N				
Robert + Christina Miller	Y	N				
Jim + Monika Bienek	Y	N				
Pat Townsend, Mark, Kelli, Anne	Y	N				
Letitia Pepper	Y	N	✓	✓		✓
Jean Diaz	Y	N				
	Y	N				

Downtown Neighborhood – January 18, 2016

No signatures

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT

SIGN-IN

Local Hazard Mitigation Plan – Public Outreach

Thursday January 14, 2016 6:30 p.m.

University Neighborhood Meeting

Crest Community Church

3431 Mt. Vernon Avenue

Name (Please Print)	City of Riverside Resident (Please Circle)	Please list all that apply: Employed in, Business Owner, or Student in the City of Riverside	
	Y N		
	Y N		
	Y N		
	Y N		
	Y N		
	Y N		
	Y N		
	Y N		
	Y N		
	Y N		

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan – Public Outreach
Monday January 25, 2016 6:30 p.m.
Neighbors of Mt. Rubidoux Alliance
Dales Senior Center
White Park, 3936 Chestnut Street

Name (Please Print)	City of Riverside Resident (Please Circle)		Please list all that apply: Employed in, Business Owner, or Student in the City of Riverside
Mark Amas	Y	N	Employed in Riverside
Natalie Gomez	Y	N	Employed in Riverside
Deborah J. Lockwood	Y	N	Retired
Barbara Maguire	Y	N	retired teacher
Erin Orel	Y	N	employed in Riverside
Roger Nahas	Y	N	retired
Peter Kaelinger	Y	N	retired
Shirlie Cunningham	Y	N	RETIRED
Bonnie Reynolds	Y	N	Employed | Resident
SHANNON CHRISTENSEN	Y	N	EMPLOYED / CORONA
Frances Fernandes	Y	N	Retired
Erin Snyder	Y	N	employed by RCREO 4500 Glenwood dr.

Ward 7 Meeting – January 27, 2016

Sign In Sheet

Meeting: Community Meeting at La Sierra Community Center
Date: January 27, 2016 6:30- 8:00 p.m.

E-Mail address will be added to E-Mail communications.

Name	E-Mail Address/Phone Number
L. Lino Luna	4956 Hedrick Ave (951) 687-8740
Christine Hernandez	6652 Adair Ave. 6890902
Hector Hernandez	6652 ADAIR AVE — 951-689-0902
Rick Olivin	11359 Dole Ct 9512692344
Alysia Webb	11359 Dole Ct 714 5851365
Ben Johnson	10307 Estates Ct 951.316.9615
Marilyn Whitney	6960 Keating Dr 92503
Tim Ferrall	951-235-5512 TANDVFERRALL@YAHOO.COM
Karen A. Chiaggio	951 785-0278 (92505)
Jack Archer	951-351-9753 9205
Leslie Chandler	(951) 688-0466
Ron Cole	(909) 645-1099 deb-ron-cole@yahoo.com
Laurelle Cox	11231 Silverwater Dr. 92505
Ben H. Savage	5678 Chadbourne ave. Riv. 92505
Karen Savage	" " "
Juan Vargas	11254 Silver Water Dr 92505
Art Kasperski, Jr.	italianoart@hotmail.com
Dennis + Jean Denbo	10240 Dunn Ct Riv.

Sign In Sheet

Meeting: Community Meeting at La Sierra Community Center
Date: January 27, 2016 6:30- 8:00 p.m.

E-Mail address will be added to E-Mail communications.

Name	E-Mail/Phone Number
Bill & Laura Denmore	sixdog1125@aol.com
Putnam	JPutnam@riverside.ca.gov
AARON MOORE	-
Anna Moore	
Connie Murphy	
William Pearce	runningtree@juno.com
Francisca Alvarez	951) 352-3409
Rizwana Qadir	Rizwanaur110@gmail.com
Jeff Greene	JTGreene@RCBOS.org
Julie Moreno	Julieamoreno24@gmail.com
Lorna Trillanes	lorna.trillanes@gmail.com
Sharon MATSTA	for HOE
[illegible]	688 6870
Abel [illegible]	
Christina Hernandez-	chrisheector 6597@sbcglobal.net

Sign In Sheet

Meeting: Community Meeting at La Sierra Community Center
Date: January 27, 2016 6:30- 8:00 p.m.

E-Mail address will be added to E-Mail communications.

Name	E-Mail Address/Phone Number
Robin von Kroeke	robinvk54@sbcglobal.net 951-809-6011
Bill Oaks	info@sierramemorialchapel.com 687-0551
Don Coon	doncoon1037@aol.com
John + Marsha Kvocka	Kvocka@sbcglobal.net
Zack Earp	wyatt48@att.net (951) 352-1278
A Alexander P.D.	aalexander@riversideca.gov
H. J. Hutzler PD	JHutzler@riversideca.gov
Mark Amas	Mamas@riversideca.gov
Laura Denomme	ldenomme1175@aol.com
Brian Smith	BSMITH RIVERSIDECA.GOV
Tracy Bowen	on-line

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan – Public Outreach
Thursday February 4, 2016 5:30 p.m.
Eastside Neighborhood Forum
Cesar Chavez Community Center
2060 University Avenue

Name (Please Print)	City of Riverside Resident (Please Circle)		Please list all that apply: Employed in, Business Owner, or Student in the City of Riverside
GREG SMITH	Y	N	COMMISSIONER – COMMUNITY POLICE REVIEW COMMISSION CITY OF RIVERSIDE
CHRIS PULLIN	Y	N	CITY OF RIVERSIDE CODE ENFORCEMENT
Christina Duran	Y	N	—
VIVIAN Stancil	Y	N	—
Turner Stancil	Y	N	—
ARNOLD LeVasseur	Y	N	City of Riv. / Ock Tree APT.
OLA FAYE Stephens	Y	N	RETIRED
RICHARD NUBERN	Y	N	RETIRED
Rosie Bonds	Y	N	Retired
DORIS BURDY	Y	N	Student / Sign Lang Athletic Trainer / Amer Red Cross
Joseph R. Victorino-Lehto	Y	N	
Sergio Robles	Y	N	Riverside Public Utilities / Student, UCR
Nhesul Hanshaw	(Y)		Mayors office

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan – Public Outreach
Thursday February 11, 2016 6:30 p.m.
University Neighborhood Meeting
Crest Community Church
3431 Mt. Vernon Avenue

Name (Please Print)	City of Riverside Resident (Please Circle)		Please list all that apply: Employed in, Business Owner, or Student in the City of Riverside
Virginia Baker	Y	N	
Joel Handen	Y	N	
Kevin Foust	Y	N	
Ruth Cabre	Y	N	Business Owner
Karen Roholt	Y	N	Retired
Carlease Chandler	Y	N	Retired
David Chandler	Y	N	Retired
Mabel Brown	Y	N	Retired
Richard MacPherson	Y	N	✓
Judy Treiber	Y	N	Retired
Danny Esquibel	Y	N	"
Anthony Zamora	Y	N	UC Employee

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan – Public Outreach
Thursday February 11, 2016 6:30 p.m.
University Neighborhood Meeting
Crest Community Church
3431 Mt. Vernon Avenue

Name (Please Print)	City of Riverside Resident (Please Circle)		Please list all that apply: Employed in, Business Owner, or Student in the City of Riverside
Marisol Zamora	Y	N	
Denis Aburto	Y	N	Employed in
Marilú Aburto	Y	N	—
Natalie Gutierrez	Y	N	Employed in
Adriana Sandoval	Y	N	
Natalie Ralston	Y	N	
Dan Straitt	Y	N	Yup
	Y	N	
	Y	N	
	Y	N	
	Y	N	
	Y	N	

Ward 4 Community Meeting – February 11, 2016

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan – Public Outreach
Thursday February 11, 2016 6:30 p.m.
Council Member Paul Davis Ward 4 Meeting
Orange Terrace Community Center
Orange Terrace Park, 20010 Orange Terrace Parkway

Name (Please Print)	City of Riverside Resident (Please Circle)		Please list all that apply: Employed in, Business Owner, or Student in the City of Riverside
Mark Amas	Y	N	
Felicidad P Morgan	Y	N	
	Y	N	
	Y	N	
	Y	N	
	Y	N	
	Y	N	
	Y	N	
	Y	N	
	Y	N	
	Y	N	
	Y	N	

Education Meeting – February 3, 2016

RIVERSIDE OFFICE OF EMERGENCY MANAGEMENT
SIGN-IN
Local Hazard Mitigation Plan Meeting - Education
Wednesday February 3, 2016 1:00 – 2:30 p.m.
Riverside EOC Conference Room

Name	Area of Assignment	Department / Division	Phone#
Mark Hanas	OEM	Fire / OEM	951-320-8103
Ken Mueller	RUSD	Operations	951-788-7496
Lean Phillips	CBU	Public Safety	951-343-4679
Kirk Lewis	RUSD	Operations	(951) 788-7135 x80418
Sherry Colgan Stone	RCCD	Risk Mgt & Legal	951-833-6790
Michael DAMICO	RCOE	Emerg. Mnng.	951-826-6250

OAPC – January 14, 2016

Riverside County
Annual Disaster Council and
Quarterly Riverside Operational Area Planning Committee (OAPC)

MINUTES
January 14, 2016
Beaumont City Hall

Attendees: Sign-in sheets have been attached and shall become part of the minutes.

I) Welcome and Opening Remarks
John J. Benoit, Riverside County Board of Supervisors Chair, and Riverside County Disaster Council Chair
Kim Saruwatari, Director, Riverside County Emergency Management Department (RivCo EMD)
John R. Hawkins, Fire Chief, Riverside County Fire Department/CalFIRE

II) Introductions
Self-introductions were made.

III) Approval of Previous Minutes
a) The Disaster Council Meeting minutes of January 8, 2015, were reviewed. Hearing no request for changes, Fire Chief John R. Hawkins introduced a motion to approve the minutes as written. Jerry Hagen, RivCo EMD, seconded the motion. All were in favor and the motion carried.
b) The OAPC Meeting minutes of October 8, 2015, were reviewed. Hearing no request for changes, Diana Rockot, RivCo EMD, introduced a motion to approve the minutes as written. Fire Chief Kevin Gaines, Morongo Fire Department, seconded the motion. All were in favor and the motion carried.
Action: Disaster Council and OAPC minutes were approved as written.

IV) New Business
a) Designation of the OAPC Vice-Chair for 2016. Gina Moran-McGough, RivCo EMD, nominated Lynn Mata, City of Corona. Fire Chief John R. Hawkins seconded the nomination. Hearing no other nominations, all were in favor and the motion carried.
Action: Lynn Mata to serve as the OAPC 2016 Vice-Chair.
b) All regular members are requested to complete the OAPC Designee(s) form and return them to the Riverside County Emergency Management Department, Attention: Annette Reese, 4080 Lemon Street, Basement Room 8, Riverside, CA 92501; Fax (951) 955-8940; or scan to .reese@fire.ca.

V) Presentation
ALICE Training Institute (Alert/Lockdown/Inform/Counter/Evacuate) – Bret Bandick, ALICE instructor, gave a presentation on a set of proactive strategies that move beyond lockdown, and increase the chance of survival during a violent intruder event. View the FBI YouTube video, "Run, Hide, Fight," at: ://www.fbi.gov/about-us/cirg/active-shooter-and-mass-casualty-incidents/run-hide-fight-
Action: Contact the ALICE Training Institute at: .alicetraining. for more information.

Agenda addition: Homeless Population in Riverside County
a) Lt. David Kondrit, Riverside County Sheriff's Department, gave an overview of the County's newly created Sheriff's Homeless Outreach Team, which addresses and manages the homeless population.
b) Donyielle Holley, Riverside County DPSS, is the Planning Coordinator for the County's 2016 Homeless Point-in-Time Count (Census) taking place Tuesday, January 26, 2016, from 5:30 a.m. to 9:30 p.m. 65 volunteers are needed to conduct this count. Contact: .riversidehomelesscounts.
c) Gina Moran-McGough, RivCo EMD, stated that the Point-in-Time Count really helps to locate homeless groups during times of emergencies. RivCo EMD will be reaching out to the cities to discuss plans to temporarily shelter the homeless during severe weather.

VI) Standing Items
a) California Operational Area Coalition (COAC) – No current updates at this time.
b) SEMS/NIMSCAST – Discussions, at the State level, are taking place on how to best report that the cities and special districts are complying with NIMSCAST. Mark Bassett will advise the group once that information becomes available.

c) Grant Updates and Status Reports
   1) The FY14 grant period will close at the end of February 2016. RivCo EMD will need final reimbursement request packets no later than March 9, 2016. If an agency is contracting with the County to provide CERT training, those invoices need to be processed before reimbursement packets can be submitted to the County. If agencies realize that they won't be able to spend all of their 2014 allocated funds, they need to advise Kim Dana as soon as possible.
   2) Kim Dana has not received all required documentation for the FY15 grant period. Agencies need to make sure that they have sent the following to Kim: signed face sheets, assurances, risk assessments, and any necessary Board Resolutions.

d) COMM Groups/Sub-Committees/Task Forces – These groups meet on a regular basis. If you have any questions about Comm Groups, please speak with your OES Emergency Services Coordinator.
   1) RivCo EMD is looking to create more sub-committees under the OAPC to include:
      (i) a Training and Exercises sub-committee to look at grant-funded training that can be brought to the OA without duplicating efforts; and
      (ii) a Communications sub-committee to develop a schedule for testing all communication devices and possibly to investigate other forms of communication.
   2) CERT – the CERT Program Managers Committee will meet immediately following this meeting.
   3) Volunteer Organizations Active in Disasters (VOAD) – Michelle Aleman, Red Cross, shared that VOAD is currently working on forming an incident assessment team during times of activations. Agencies are encouraged to attend VOAD meetings which take place the first Thursday of every month at Beaumont City Hall.

e) CalOES – Pastor Guevarra stated that during the week of January , Southern REOC was activated to a Level II in support of the Winter Storms. The Governor Proclaimed a State of Emergency for the Waterman Incident in San Bernardino. The Sate continues to work with L.A. County on the Alyso Canyon Gas Leak.

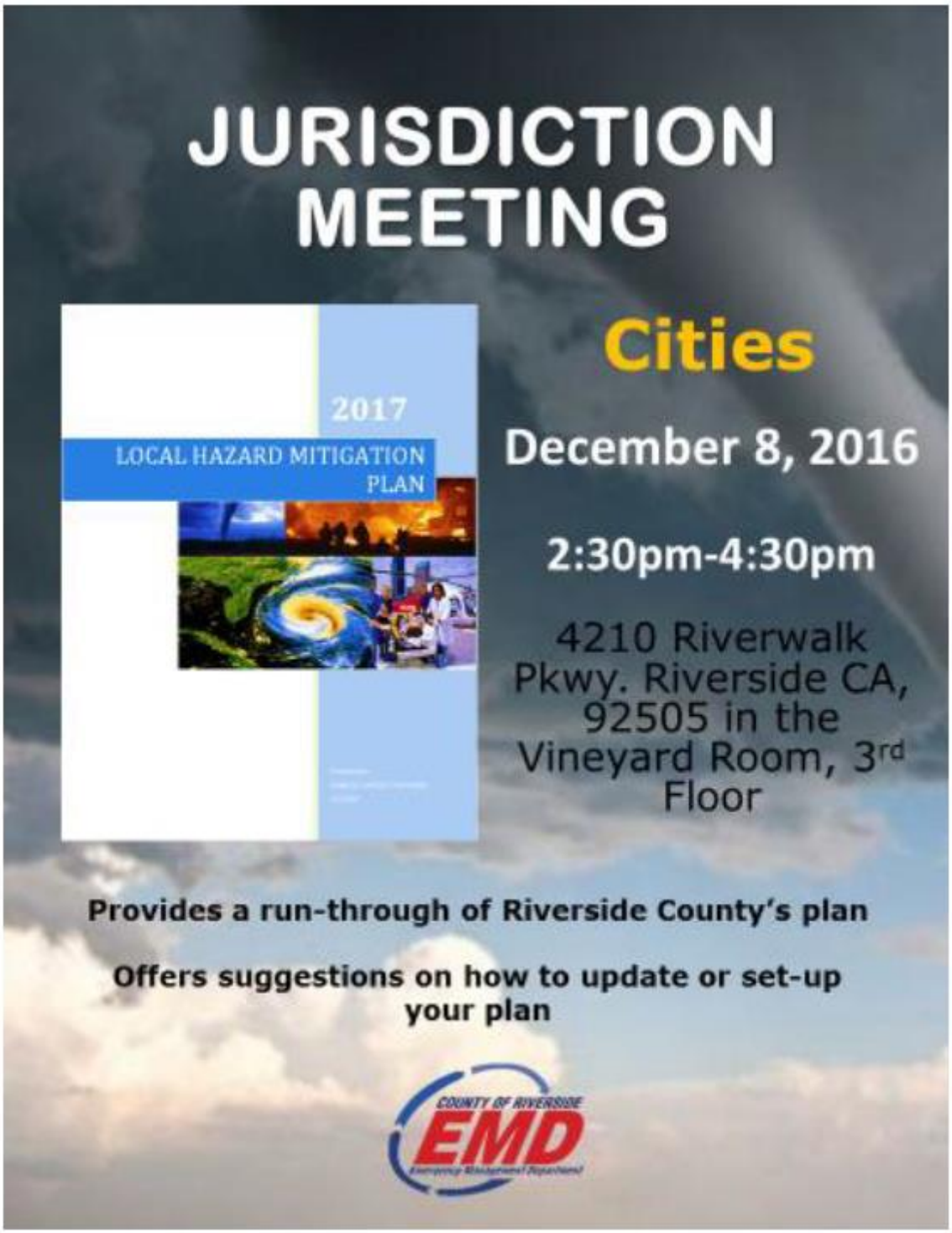
VII) Roundtable & Public Comment

a) Capt. Nick Faraclas, City of Riverside, announced 5 upcoming training classes. Contact Capt. Faraclas for more information on these courses: @riversideca.
b) Steve Jensen, RivCo EMD, announced that the County is sponsoring a PIO Crisis Communication course on January and . Contact (951) 358-7100 to sign up.
c) Mark Annas, City of Riverside, shared that the City of Riverside is in the process of updating their Local Hazard Mitigation Plan (LHMP). A public comment survey is available through February 11, 2016 at .riversideca. – Local Hazard Mitigation Update.
d) Nancy Layton, Idyllwild Mountain Disaster Preparedness, announced that Idyllwild received a No. 2 Rating from the Insurance Services Office (ISO) – out of 30,000 fire departments/districts nationwide.
e) Michelle Aleman, Red Cross, shared that the Red Cross is sponsoring training for event-based volunteers for shelter operations in support of an El Niño response. Contact Lecia Elzig for more information at @msn. or (951) 315-8692.
f) Kim Saruwatari stated that the County is finalizing the process to procure a new Emergency Warning Notification System. Kim also reminded the group that the OAPC bi-laws still need to be revised to include the Tribes, and she asks that the Tribes complete the OAPC designee forms in the meantime.

VIII) Next Quarterly OAPC Meeting..... Thursday, April 14, 2016
Next Annual Disaster Council Meeting.....Thursday, January 12, 2017

IX) Adjournment

LHMP Cities Workshop – December 8, 2016



OAPC – January 12, 2017

RIVERSIDE COUNTY
ANNUAL DISASTER COUNCIL /
QUARTERLY OPERATIONAL AREA PLANNING COMMITTEE
(OAPC)

January 12, 2017
9:00 a.m. – 11:00 a.m.
Beaumont City Hall, 550 East 6th St., Beaumont, CA 92223

AGENDA

I) Pledge of Allegiance, Welcome & Opening Remarks
John Tavaglione, Chair, Riverside County Board of Supervisors/Riverside County Disaster Council
Kim Saruwatari, Director, Riverside County Emergency Management Department
John R. Hawkins, Fire Chief, Riverside County Fire Department/CALFIRE

II) Introductions

III) Approval of Minutes
Disaster Council Meeting Minutes of January 14, 2016..... ATTACHMENT I
OAPC Meeting Minutes of October 13, 2016.....ATTACHMENT II

IV) New Business
Designation of the OAPC Vice-Chair for 2017
OAPC Appointment of Designee Form.....ATTACHMENT III

V) Presentation
Crisis Communications and Media Response Training for Today's Leaders. Richard Brundage, President, Center for Advanced Media Studies.

V) Standing Items
1. California Operational Area Coalition (COAC) Update
2. Standardized Emergency Management System (SEMS) / National Incident Management System (NIMS) Update / NIMSCAST
3. Grant Updates & Status Reports
4. Sub-Committees/Task Forces
   a. Training and Exercise
   b. Communications
5. Community Emergency Response Training (CERT) Program Managers' Update
6. VOAD – Volunteer Organizations Active in Disasters
7. CalOES Update
8. Local Hazard Mitigation Plan (LHMP) Update

VI. Roundtable & Public Comment

VII. Next Annual Disaster Council Meeting.....Thursday, January 11, 2018
Next Quarterly OAPC Meeting .....Thursday, April 13, 2017

VIII. Adjournment

City LHMP Workshop – February 7, 2017

COUNTY OF RIVERSIDE
EMD
Emergency Management Department

Kim Saruwatari, MPH
Director

City LHMP Workshop

AGENDA

Tuesday Feb. 7, 2017
9:00 a.m. - 10:00 a.m.

June 16th
August County submission
use section #'s

Subject	Time	Presented By	Purpose
I. Welcome and Introductions	5 Min.	Sarah Bruns	Inform
II. Updates • SB 379 • Hazus • Hazard Ranking • Mitigation Strategies	20 Min.	Sarah Bruns & Melanie Gonzalez	Inform/Printout
III. Participant Status Update	15 Min.	All	Discuss
IV. Round Table	15 Min	All	Discuss
V. Adjournment	5 Min.	Sarah Bruns	

4210 Riverwalk Parkway, Suite 300
Riverside, California 92505
T: 951.358.7100 ♦ F: 951.358.7105 ♦ Web: www.rivcoready.org

City Council Agenda – January 12, 2016

1 P.M.

MAYOR CALLS MEETING TO ORDER

DISCUSSION CALENDAR

This portion of the City Council/Housing Authority Agenda is for all matters where staff and public participation is anticipated. Individual audience participation is limited to 3 minutes.

1 A Resolution of the City Council of the City of Riverside, California, proposing an amendment to the City Charter entitled "The Riverside Criminal Prosecution and Crime Reduction Measure" - A Resolution of the City Council of the City of Riverside, California, submitting to the qualified electors of the City of Riverside an amendment to the Charter of the City of Riverside entitled "The Riverside Criminal Prosecution and Crime Reduction Measure" at the municipal election of June 7, 2016, for not-to-exceed $80,000 from City Attorney's Office Budget - Waive further readings (City Attorney) (All Wards) - CONTINUED TO FEBRUARY 9, 2016, AT 1 P.M., DUE TO OMISSION BY THE CITY CLERK OF DOCUMENTS IN AGENDA PUBLICATION

Attachments: Report
R - Charter Amendment
R - Calling Election

2 El Niño storm preparation update (Fire) (All Wards)

Attachments: Report
Presentation

3 2017 Local Hazard Mitigation Plan update (Fire) (All Wards)

Attachments: Report
Presentation

PUBLIC COMMENT

4 This is the portion of the meeting specifically set aside to invite your comments regarding Closed Session items and any matters within the jurisdiction of the City Council/Housing Authority - Individual audience participation is limited to 3 minutes and you will be asked to state your name and city of residence. Please complete and submit a speaker card to the City Clerk.

COMMUNICATIONS

5 Legislative report

Public Safety Committee Agenda – September 21, 2016

City of Arts & Innovation

City of Riverside

Public Safety Committee

3900 Main Street
Riverside, CA 92522
(951) 826-5557

Agenda

Wednesday, September 21, 2016 | **1:00 PM** | **City Hall - Art Pick Council Chamber**

MISSION STATEMENT

The City of Riverside is committed to providing high quality municipal services to ensure a safe, inclusive, and livable community

LISTENING ASSISTIVE DEVICES are available for the hearing impaired--please see City Clerk. The City of Riverside wishes to make all of its public meetings accessible to the public. Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities, as required by 42 U.S.C. §12132 of the Americans with Disabilities Act of 1990. Any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to the City's ADA Coordinator at (951) 826-5427 or TDD at (951) 826-5439 at least 72 hours before the meeting, if possible.

Agenda related writings or documents provided to the Committee are available for public inspection in the Office of the City Clerk, at www.riversideca.gov, and in the binder located at the Concierge desk in the City Hall lobby while the meeting is in session.

PLEASE NOTE--Individual audience participation is limited to 3 minutes

1 Local Hazard Mitigation Plan update - Direct submittal (All Wards)

Michael D. Moore, Fire Chief

Attachments: Report
Presentation

2 American Medical Response franchise fees update (All Wards)

Michael D. Moore, Fire Chief

Attachments: Report
Presentation

City Council Agenda – June 6, 2016

Finance

9 Publication of notice for Fiscal Year 2017-18 Annual Appropriations Limit of $320,545,547 (All Wards)

Attachments: Report
Appropriations Limit Calculation
Permitted Appropriation Growth Rate
Resolution

10 Adopt an Ordinance of the City of Riverside, California, establishing a Risk Management Administration function within the Finance Department by amending Title 3 of the Riverside Municipal Code by adding Chapter 3.18 - Waive further reading (Intro. on 5-16-17, All Wards)

Attachments: Ordinance

Fire

11 A Resolution of the City Council of the City of Riverside, California, establishing the authorized agents of the City of Riverside for filing applications and requesting release of funds for Federal assistance from Federal Emergency Management Agency, the California Office of Emergency Services and/or State Financial Assistance under the California Disaster Assistance Act designating Assistant City Manager, Fire Chief, and Emergency Services Administrator - Waive further reading (All Wards)

Attachments: Report
Resolution Certification
Project Application
Assurances
Resolution

12 2017 Local Hazard Mitigation Plan update (All Wards)

Attachments: Report
Presentation

General Services

13 Award Bid 7482 to Raceway Ford, Inc., Riverside, for $416,982.72 from General Services Motor Pool Automotive Equipment and Public Utilities Water Field Motor Pool Equipment Rentals (Utilities Funding Vehicle Upgrades) Accounts for eight ethanol (E85) fuel Ford F350 vehicles for Public Utilities Department Water Field Operations Division (All Wards)

Council Report for June 6th City Council Meeting

City Council Memorandum

City of Arts & Innovation

TO:	**HONORABLE MAYOR AND CITY COUNCIL**	**DATE: JUNE 6, 2017**
FROM:	**FIRE DEPARTMENT**	**WARDS: ALL**
SUBJECT:	**CITY OF RIVERSIDE LOCAL HAZARD MITIGATION PLAN 2017 UPDATE**	

ISSUE:

Receive a report on the 2017 Update to the Local Hazard Mitigation Plan and open a public comment period for June 7 to June 14 as required for the final draft submission of the 2017 Update to the Local Hazard Mitigation Plan to Riverside County Emergency Management Department.

RECOMMENDATION:

That the City Council receive this report and open the public comment period for the 2017 Update to the Local Hazard Mitigation Plan.

LEGISTLATIVE HISTORY:

The Disaster Mitigation Act of 2000 ("DMA 2000") (Public Law 106-390) provides the legal basis for FEMA mitigation planning requirements for State, local and Tribal governments as a condition of mitigation grant assistance. DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Act by repealing the previous mitigation planning provisions and replacing them with a new set of requirements that emphasize the need for State, local, and Tribal entities to closely coordinate mitigation planning and implementation efforts.

BACKGROUND:

The purpose of the Local Hazard Mitigation Plan (LHMP) is to identify the City's hazards, review and assess past disaster occurrences, estimate the probability of future occurrences, and set mitigation goals to help reduce or eliminate long-term risk to people and property from natural and other hazards. An LHMP is a requirement for Federal Emergency Management Agency (FEMA) pre-disaster and post-disaster mitigation project grant assistance.

As part of data gathering for the hazard mitigation planning process, the City of Riverside Office of Emergency Management conducted a public comment period from January 2016 to February 2016.

The City of Riverside Office of Emergency Management working with the Riverside County

Emergency Management Department has developed a Local Hazard Mitigation Plan that is an annex to the main County Multi-Jurisdictional Hazard Mitigation Plan.

DISCUSSION:

To receive input into the final draft of the LHMP, the OEM planning team will open a public comment period beginning tomorrow June 7th through June 14th 2017. Comments may be made through different methodologies to include: city website (www.riversideca.gov) Local Hazard Mitigation Page and all City of Riverside libraries.

FISCAL IMPACT:

There is no fiscal impact with this report.

Prepared by:	Michael D. Moore, Fire Chief
Certified as to availability of funds:	Scott G. Miller, PhD., Chief Financial Officer/City Treasurer
Approved by:	Alexander T. Nguyen, Assistant City Manager
Approved as to form:	Gary G. Geuss, City Attorney

Attachment: Presentation

Social Media Posts Regarding Public Comment

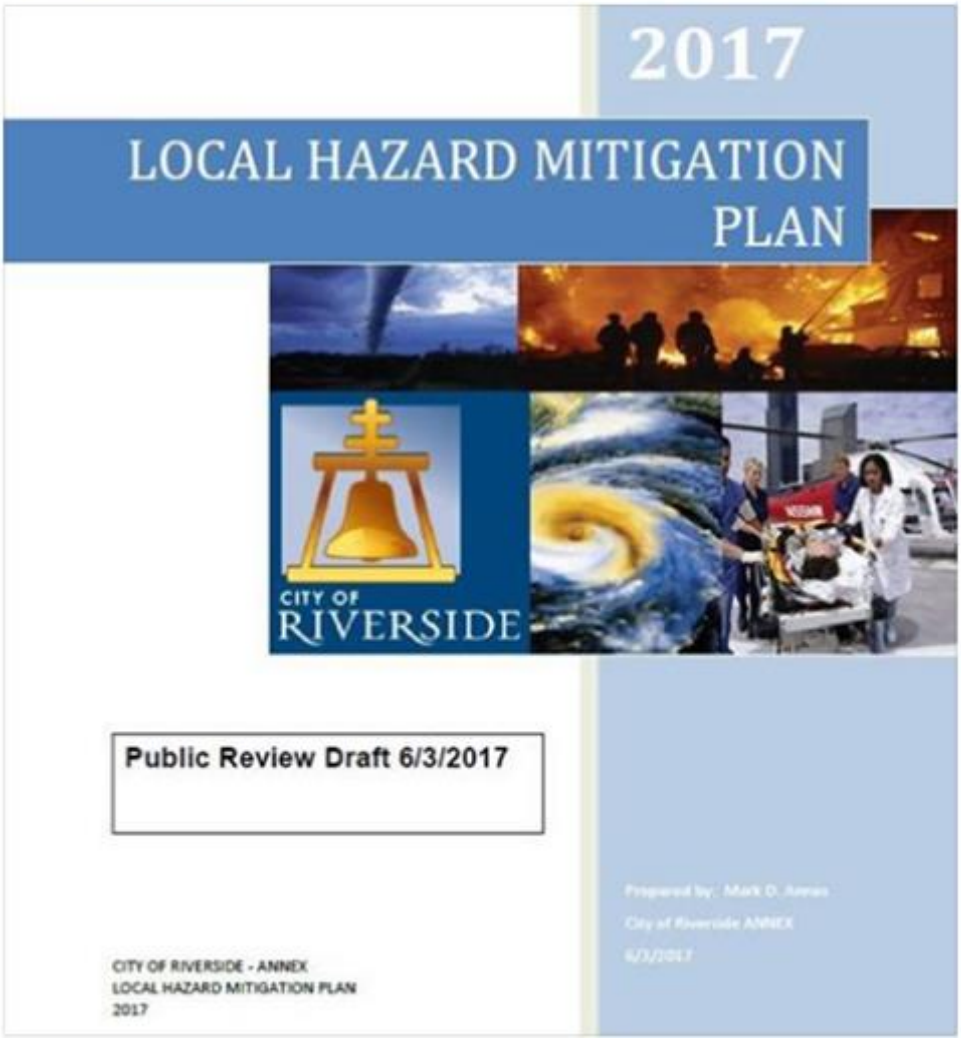
City of Riverside,CA Retweeted
Riverside OEM @RiversideOEM · Jun 12
Community is encouraged to check out the draft Hazard Mitigation Plan. Public comment continues through June 14. riversideca.gov/fire/oem/hazar...
LOCAL HAZARD MITIGATION PLAN
CITY OF RIVERSIDE
Public Review Draft 6/3/2017
CITY OF RIVERSIDE - ANNEX
LOCAL HAZARD MITIGATION PLAN
1
2

Riverside OEM @RiversideOEM · Jun 12
Community is encouraged to check out the draft Hazard Mitigation Plan, Public comment continues through June 14. riversideca.gov/fire/oem/hazar...
2017
LOCAL HAZARD MITIGATION PLAN
CITY OF RIVERSIDE
Public Review Draft 6/3/2017
CITY OF RIVERSIDE - ANNEX
LOCAL HAZARD MITIGATION PLAN
1
2
Riverside OEM @RiversideOEM · Jun 7
Draft of Local Hazard Mitigation Plan also available at Riverside City Library branches.
1
2
Riverside OEM @RiversideOEM · Jun 7
Public Comment Period now open for the Local Hazard Mitigation Plan 2017 update. Go To: riversideca.gov/fire/oem/hazar... to read draft & make comment

City of Riverside - Office of Emergency Management
Published by Mark Annas [?] · June 12 at 3:18pm ·

The City of Riverside seeks community input on the Local Hazard Mitigation Plan update for 2017. Hazard Mitigation seeks to identify hazards and reduce the risk associated with those hazards. Community members may go to the Local Hazard Mitigation Page at https://www.riversideca.gov/fire/oem/hazard.asp .
Scroll down to where it says Current Local Hazard Mitigation Plan and click on the Public Comment for 2017 Local Hazard Mitigation Plan Link to download the draft.

Afterwa... See More



City of Riverside - Office of Emergency Management
Published by Mark Annas [?] · June 7 at 9:38am ·

A draft of the Local Hazard Mitigation Plan is also available for review and comment at city of Riverside library branches.

City of Riverside - Office of Emergency Management
Published by Mark Annas [?] · June 7 at 5:23am ·

Public Comment Period now open for the Local Hazard Mitigation Plan 2017 update. Go To: https://www.riversideca.gov/fire/oem/hazard.asp to read draft & make comment

Riverside, California | City of Arts & Innovation | Fire Department

WWW.RIVERSIDECA.GOV

Media Release – June 6, 2017 Public Comment Period

CITY OF RIVERSIDE
FIRE DEPARTMENT
Serving Our Community for 125 Years

MEDIA RELEASE

FOR IMMEDIATE RELEASE – June 6, 2017
Mark Annas, Emergency Services Administrator / 951-320-8103 / mannas@riversideca.gov

Public Comment Period Opens for Hazard Mitigation Plan Update

RIVERSIDE CA, – The City of Riverside 2017 Local Hazard Mitigation Plan draft is open for public comment. The Public Comment Period is from June 7th through 5:00pm June 14th. The plan, updated every five years helps identify local hazards. Wherever possible, the plan identifies steps, projects, policies, and codes that help to avoid, reduce and mitigate disaster damages.

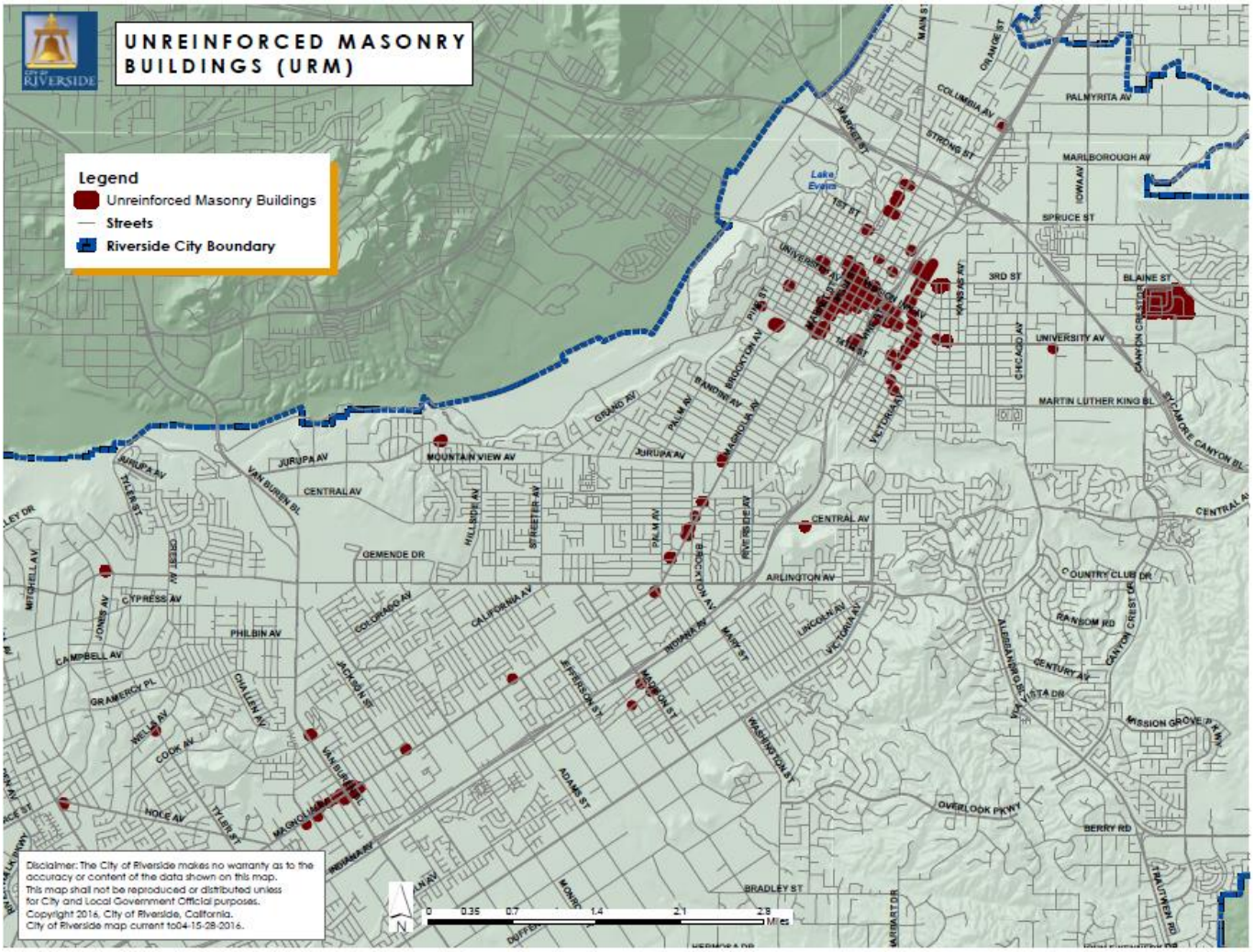
"The community is key to a successful plan, said Mark Annas, Emergency Services Administrator, the feedback received during the numerous community, partner, and LHMP Planning Team meetings has helped focus the mitigation efforts to help mitigate losses associated with disaster."

The LHMP Draft may be downloaded at the City of Riverside Office of Emergency Management Local Hazard Mitigation webpage https://www.riversideca.gov/fire/oem/hazard.asp). A hard copy of the LHMP Draft is also being made available at all City of Riverside Libraries. Comments on the draft may be turned in either online via the Public Comment Survey form or at the library location.

Visit our Web page @ http://riversideca.gov/fire/oem or Follow us on

Sign up for automatic Fire Incident e-mail updates @
https://public.govdelivery.com/accounts/CARIVERSIDE/subscriber/new?topic_id=CARIVERSIDE_184

Map – Unreinforced Masonry Buildings



APPENDIX B – INVENTORY WORKSHEETS

RIVERSIDE

LOCAL HAZARD MITIGATION PLAN

2016 INVENTORY WORKSHEETS

CITY OF RIVERSIDE
November 4, 2015

TABLE OF CONTENTS

Introduction: These documents are meant to be discussed, used and reviewed by a multi-disciplinary team. The Participation by a wide range of stakeholders who play a role in identifying and implementing mitigation actions is required.

1. Local Jurisdiction Contact Information	Page 148
2. Hazard Identification Questionnaire	Pages 150-152
3. Specific Hazards Summary	Page 153
4. Jurisdiction Vulnerability Worksheet	Pages 153-155
5. Jurisdiction Mitigation Strategies and Goals	Pages 156-161
6. Local Jurisdiction Proposed Mitigation Action and Strategy Proposal	Pages 162
7. Local Jurisdiction Development Trends	Pages 163

1. LOCAL JURISDICTION CONTACT INFORMATION

The information on this page identifies:

- Jurisdiction and the contact person
- Jurisdiction's service area size and population
- EOP Plan and a Safety Element of their General Plan

PLEASE PROVIDE THE FOLLOWING INFORMATION:

Agency/Jurisdiction:		CITY OF RIVERSIDE		
Type Agency/Jurisdiction:		CITY		
Contact Person:	Title:	EMERGENCY SERVICES ADMINISTRATOR		
First Name:	MARK	Last Name:	ANNAS	
Agency Address:	Street:	3085 ST LAWRENCE ST		
	City:	RIVERSIDE		
	State:	CA		
	Zip:	92504		
Contact Phone	951-320-8100		FAX	
E-mail				

Population Served	326,792	Square Miles Served	81

Does your organization have a general plan?	YES
Does your organization have a safety component to the general plan?	YES
What year was your plan last updated?	2012

Does your organization have a disaster/emergency operations plan?	YES
What year was your plan last updated?	2011
Do you have a recovery annex or section in your plan?	YES
Do you have a terrorism/WMD annex or section in your plan?	YES

2. Hazard Identification Questionnaire

The purpose of the questionnaire is to help identify the hazards within your service area. The list was developed from the first round of meetings with the various working groups in the 2012 plan creation, and from the hazards listed in the County's General Plan. Each hazard is discussed in detail in the 2012 LHMP. The information will be used as the basis for each jurisdiction to evaluate its capabilities, determine its needs, and to assist in developing goals and strategies. The information identifies:

a) What hazards can be identified within or adjacent to the service area of the jurisdiction.
b) Which of those hazards have had reoccurring events
c) What specific hazards and risks are considered by the jurisdiction to be a threat specifically to the jurisdiction? (These locations should be identified by name and location for inclusion in the Specific Hazard Summary Table).
    a. Specific types of facilities owned and operated by the jurisdiction.
    b. Locations damaged from prior disasters or hazard causing events.
d) Information about the jurisdiction's EOC

With your Multi-Disciplinary Planning Team:

a. Instructions for Updating Jurisdictions, with your planning team: Review your old Questionnaire for accuracy and relevance, mark changes.

b. Instructions for New Jurisdictions and Special Districts, with your planning team, meet and go over the questionnaire. Fill in YES, NO or NA on the Questionnaire.

HAZARD IDENTIFICATION QUESTIONNAIRE

DOES YOUR ORGANIZATION HAVE:	
AIRPORT IN JURISDICTION	YES
AIRPORT NEXT TO JURISDICTION	YES
DAIRY INDUSTRY	NO
POULTRY INDUSTRY	NO
CROPS/ORCHARDS	YES
DAMS IN JURISDICTION	YES
DAMS NEXT TO JURISDICTION	YES
LAKE/RESERVOIR IN JURISDICTION	YES
LAKE/RESERVOIR NEAR JURISDICTION	YES
JURISDICTION IN FLOOD PLAIN	YES
CONTROLLED FLOOD CONTROL CHANNEL	YES
UNCONTROLLED FLOOD CONTROL CHANNEL	YES
EARTHQUAKE FAULTS IN JURISDICTION	NO
EARTHQUAKE FAULTS NEXT TO JURISDICTION	YES
MOBILE HOME PARKS	YES
NON-REINFORCED FREEWAY BRIDGES	NO
NON-REINFORCED BRIDGES	YES
BRIDGES IN FLOOD PLAIN	YES
BRIDGES OVER OR ACROSS RIVER/STREAM	YES
ROADWAY CROSSING RIVER/STREAM	YES
NON REINFORCED BUILDINGS	YES
FREEWAY/MAJOR HIGHWAY IN JURISDICTION	YES
FREEWAY/MAJOR HIGHWAY NEXT TO JURISDICTION	YES
FOREST AREA IN JURISDICTION	NO
FOREST AREA NEXT TO JURISDICTION	NO
WITHIN THE 50 MILES SAN ONOFRE EVACUATION ZONE	YES
MAJOR GAS/OIL PIPELINES IN JURISDICTION	YES
MAJOR GAS/OIL PIPELINES NEXT TO JURISDICTION	YES
RAILROAD TRACKS IN JURISDICTION	YES
RAILROAD TRACKS NEXT TO JURISDICTION	YES
HAZARDOUS WASTE FACILITIES IN JURISDICTION	YES
HAZARDOUS WASTE FACILITIES NEXT TO JURISDICTION	YES
HAZARDOUS STORAGE FACILITIES IN JURISDICTION	YES
HAZARDOUS STORAGE FACILITIES NEXT TO JURISDICTION	YES
DOES YOUR ORGANIZATION OWN OR OPERATE A FACILITY	
IN A FLOOD PLAIN	YES
NEAR FLOOD PLAIN	YES
NEAR RAILROAD TRACKS	YES
NEAR A DAM	YES
UPSTREAM FROM A DAM	YES
DOWNSTREAM FROM A DAM	YES
DOWNSTREAM OF A LAKE	YES
DOWNSTREAM FROM A RESERVOIR	YES
NEAR A CONTROLLED FLOOD CONTROL CHANNEL	YES
NEAR UNCONTROLLED FLOOD CONTROL CHANNEL	YES
ON AN EARTHQUAKE FAULT	
NEAR AN EARTHQUAKE FAULT	YES
WITHIN THE 50 MILE SAN ONOFRE EVACUATION ZONE	YES

IN A FOREST AREA	NO
NEAR A FOREST AREA	NO
NEAR A MAJOR HIGHWAY	YES
A HAZARDOUS WASTE FACILITY	NO
NEAR A HAZARDOUS WASTE FACILITY	YES
A HAZARDOUS STORAGE FACILITY	YES
NEAR A HAZARDOUS STORAGE FACILITY	YES
NON REINFORCED BUILDINGS	YES
A MAJOR GAS/OIL PIPELINE	NO
NEAR A MAJOR GAS/OIL PIPELINE	YES
DOES YOUR ORGANIZATION HAVE ANY LOCATIONS THAT:	
HAVE BEEN DAMAGED BY EARTHQUAKE AND NOT REPAIRED	NO
HAVE BEEN DAMAGED BY FLOOD	YES
HAVE BEEN DAMAGED BY FLOOD MORE THAN ONCE	YES
HAVE BEEN DAMAGED BY FOREST FIRE	NO
HAVE BEEN DAMAGED BY FOREST FIRE MORE THAN ONCE	NO
HAVE BEEN DAMAGED BY WILDLAND FIRE	YES
HAVE BEEN DAMAGED BY WILDLAND FIRE MORE THAN ONCE	YES
HAVE BEEN IMPACTED BY A TRANSPORTATION ACCIDENT	YES
HAVE BEEN IMPACTED BY A PIPELINE EVENT	YES
EMERGENCY OPERATIONS INFORMATION	
DOES YOUR ORGANIZATION HAVE AN EOC	YES
IS YOUR EOC LOCATED IN A FLOOD PLAIN	YES
NEAR FLOOD PLAIN	YES
NEAR RAILROAD TRACKS	YES
NEAR A DAM	NO
UPSTREAM FROM A DAM	YES
DOWNSTREAM FROM A DAM	YES
DOWNSTREAM OF A LAKE	NO
DOWNSTREAM FROM A RESERVOIR	YES
NEAR A CONTROLLED FLOOD CONTROL CHANNEL	NO
NEAR UNCONTROLLED FLOOD CONTROL CHANNEL	YES
ON AN EARTHQUAKE FAULT	NO
NEAR AN EARTHQUAKE FAULT	YES
WITHIN THE 50 MILE SAN ONOFRE EVACUATION ZONE	YES
IN A FOREST AREA	NO
NEAR A FOREST AREA	NO
NEAR A MAJOR HIGHWAY	YES
A HAZARDOUS WASTE FACILITY	NO
NEAR A HAZARDOUS WASTE FACILITY	NO
A HAZARDOUS STORAGE FACILITY	NO
NEAR A HAZARDOUS STORAGE FACILITY	YES
NON REINFORCED BUILDINGS	NO
A MAJOR GAS/OIL PIPELINE	NO
NEAR A MAJOR GAS/OIL PIPELINE	NO
OTHER FACILITY INFORMATION ARE THERE LOCATIONS WITHIN YOUR JURISDICTION THAT:	
COULD BE CONSIDERED A TERRORIST TARGET	YES
COULD BE CONSIDERED A BIO-HAZARD RISK	YES

With your planning team, list the “Yes” answers and discuss. Use the information as a group to summarize your jurisdiction’s hazards and vulnerabilities.

3. SPECIFIC HAZARDS SUMMARY

This table helps to identify the information (name, owner, location, etc.) about the specific hazards identified in the Hazard Questionnaire.

In the Summary Table, list the basic information of the hazards identified by the jurisdiction in the Hazard Identification Questionnaire as a potential threat. These specific hazards were used in the development of response plans, maps, and other analysis data.

a. Instructions for Updating Jurisdictions and Special Districts: With your planning team, review the "Yes" answers and see if there were any changes, if so summarize why there is a difference from the 2012.

b. Instructions for New Jurisdictions and Special Districts: With your planning team, review the "Yes" answers and discuss. Use the information as a group to summarize your jurisdiction's hazards and vulnerabilities.

SPECIFIC HAZARDS SUMMARY

Jurisdiction	Hazard Type	Hazard Name	In Jurisdiction?	Adjacent to Jurisdiction?

4. JURISDICTION VULNERABILITY WORKSHEET

This table is a listing of the primary hazards identified by the 2012 LHMP working groups. Each jurisdiction was asked to evaluate the potential for an event to occur in their jurisdiction by hazard. They were also asked to evaluate the potential impact of that event by hazard on their jurisdiction. The impact potential was determined based on:

1. Economic loss and recovery
2. Physical loss to structures (residential, commercial, and critical facilities)
3. The loss or damage to the jurisdictions infrastructure
4. Their ability to continue with normal daily governmental activities
5. Their ability to quickly recover from the event and return to normal daily activities
6. The loss of life and potential injuries from the event.

The jurisdictions were asked to rate the potential and severity using a scale of between 0 and 4 (4 being the most severe). The jurisdictions were also asked to rank the listed hazards as they

relate to their jurisdiction from 1 to 25 (1 being the highest overall threat to their jurisdiction).

With the assistance of the RCIP Plan and County Departments, Riverside County OES conducted an extensive evaluation of the severity and probability potential for the county as a whole. The hazards were also ranked for the County. These numbers and rankings were provided to the jurisdictions as a comparison guide.

A separate table was created to address the hazards relating to agriculture and was assessed by the agriculture working group.

a. Instructions for Updating Jurisdictions and Special Districts: Please review the table, determine if your ranking from the 2012 LHMP remains the same.
b. Instructions for New Jurisdictions and Special Districts: Please evaluate the potential for an event to occur in your jurisdiction by hazard. Then, evaluate the potential impact of that event by hazard on your jurisdiction according to #1-6 from the potential impact list above.

NOTE: Under Medical, Pandemic was added. This was a result of the H1N1 and other incidents.

NAME:	AGENCY:	DATE :

	LOCAL JURISDICTION		
HAZARD	**SEVERITY 0 - 4**	**PROBABILITY 0 - 4**	**RANKING 1 - 25**
1. EARTHQUAKE			
2. WILDLAND FIRE			
3. FLOOD			
OTHER NATURAL HAZARDS			
4. DROUGHT			
5. LANDSLIDES			
6. INSECT INFESTATION			
7. EXTREME SUMMER/WINTER WEATHER			
8. SEVERE WIND EVENT			
9. Tornado			
AGRICULTURAL			
10. TERRORISM			
OTHER MAN-MADE			
11. GAS/FUEL PIPELINE			
12. AQUEDUCT/CANAL			
13. TRANSPORTATION			
14. POWER OUTAGE			
15. HAZMAT ACCIDENTS			
16. NUCLEAR ACCIDENT			
17. TERRORISM			
18. CIVIL UNREST			
19. JAIL/PRISON EVENT			
20. WATER SYSTEM			
21. SEWER SYSTEM			
22. DAM FAILURE/INUNDATION			
23. COMMUNICATIONS OUTAGE			
24. CYBER SECURITY			
MEDICAL			
25. PANDEMIC/DISEASE/CONTAMINATION			

5. JURISDICTION MITIGATION STRATEGIES AND GOALS

This comprehensive table is a listing of the various mitigation strategies, goals, and objectives developed by the 2012 LHMP working groups. The jurisdictions were also given the opportunity to list additional strategies, goals, and objectives specific to either their jurisdiction or their workgroup (i.e. the hospitals, agriculture, etc.).

LOCAL JURISDICTION MITIGATION STRATEGIES AND GOALS

With your Planning Team

a. Instructions for Updating Jurisdictions and Special Districts: please review the table; determine if your ranking from the 2012 LHMP remains the same.

b. Instructions for New Jurisdictions and Special Districts: please follow below:

Please evaluate the priority level for each listed mitigation goal identified below as it relates to your jurisdiction or facility. If you have any additional mitigation goals or recommendations, please list them at the end of this document.

Place an H (High), M (Medium), L (Low), or N/A (Not Applicable) for your priority level for each mitigation goal in the box next to the activity.

EARTHQUAKE	
H	Aggressive public education campaign in light of predictions
H	Generate new literature for dissemination to:
H	◊ Government employees
H	◊ Businesses
H	◊ Hotel/motel literature
H	◊ Local radio stations for education
H	◊ Public education via utilities
H	◊ Identify/create television documentary content
H	Improve the Emergency Alert System (EAS)
H	◊ Consider integration with radio notification systems
H	◊ Upgrade alerting and warning systems for hearing impaired
H	◊ Training and maintenance
M	Procure earthquake-warning devices for critical facilities
M	Reinforce emergency response facilities
M	Provide training to hospital staffs
M	Require earthquake gas shutoffs on remodels/new construction
M	Evaluate re-enforcing reservoir concrete bases
L	Evaluate EOCs for seismic stability
L	Install earthquake cutoffs at reservoirs
L	Install earthquake-warning devices at critical facilities
NA	Develop a dam inundation plan for new Diamond Valley Reservoir
	Earthquake retrofitting
H	◊ Bridges/dams/pipelines
H	◊ Government buildings/schools
H	◊ Mobile home parks
H	Develop educational materials on structural reinforcement and home inspections **(ALREADY DEVELOPED)**
	Ensure Uniform Building Code compliance
H	◊ Update to current compliance when retrofitting
M	Insurance coverage on public facilities

L	Funding for non-structural abatement (Earthquake kits, etc.)
NA	Pre - identify empty commercial space for seismic re-location
H	Electrical co-generation facilities need retrofitting/reinforcement (Palm Springs, others?)
M	Mapping of liquefaction zones
M	Incorporate County geologist data into planning
H	Backup water supplies for hospitals
M	Evaluate pipeline seismic resiliency
L	Pre-positioning of temporary response structures
H	Fire sprinkler ordinance for all structures
L	Evaluate adequacy of reservoir capacity for sprinkler systems
M	Training/standardization for contractors performing retrofitting
	Website with mitigation/contractor/retrofitting information
M	◊ Links to jurisdictions
M	◊ Alerting information
M	◊ Volunteer information
M	Evaluate depths of aquifers/wells for adequacy during quakes
M	Evaluate hazmat storage regulations near faults
COMMUNICATIONS IN DISASTER ISSUES	
H	Communications Interoperability
H	Harden repeater sites
H	Continue existing interoperability project
H	Strengthen/harden
H	Relocate
H	Redundancy
H	Mobile repeaters
FLOODS	
M	Update development policies for flood plains
M	Public education on locations of flood plains
M	Develop multi-jurisdictional working group on floodplain management
M	Develop greenbelt requirements in new developments
M	Update weather pattern/flood plain maps
H	Conduct countywide study of flood barriers/channels/gates/water dispersal systems
M	Required water flow/runoff plans for new development
H	Perform GIS mapping of flood channels, etc.
L	Install vehicular crossing gates/physical barriers for road closure
H	Maintenance of storm sewers/flood channels
H	Create map of flood channels/diversions/water systems etc.
L	Require digital floor plans on new non-residential construction
H	Upgrade dirt embankments to concrete
L	Conduct countywide needs study on drainage capabilities
L	Increase number of pumping stations

H	Increase sandbag distribution capacities
	Develop pre-planned response plan for floods
M	◊ Evacuation documentation
M	◊ Re-examine historical flooding data for potential street re-design
H	Training for city/county PIOs about flood issues
	Warning systems - ensure accurate information provided
M	◊ Publicize flood plain information (website?)
L	◊ Install warning/water level signage
M	◊ Enhanced public information
H	◊ Road closure compliance
H	◊ Shelter locations
H	◊ Pre-event communications
	Look at County requirements for neighborhood access
M	◊ Secondary means of ingress/egress
M	Vegetation restoration programs
M	Ensure critical facilities are hardened/backed up
H	Hardening water towers
H	Terrorism Surveillance - cameras at reservoirs/dams
H	Riverbed maintenance
H	Evaluate existing lift stations for adequacy
M	Acquisition of property for on-site retention
M	Evaluate regulations on roof drainage mechanism
M	Erosion-resistant plants
M	Traffic light protection
M	Upkeep of diversionary devices
M	Install more turn-off valves on pipelines
H	Backup generation facilities
H	Identify swift water rescue capabilities across County
	WILDFIRES
H	Aggressive weed abatement program
H	◊ Networking of agencies for weed abatement
NA	Develop strategic plan for forest management
H	Public education on wildfire defense
H	Encourage citizen surveillance and reporting
H	Identify hydrants with equipment ownership information
H	Enhanced firefighting equipment
H	Fire spotter program/red flag program
H	◊ Expand to other utilities
M	Research on insect/pest mitigation technologies
M	Volunteer home inspection program
H	Public education program
H	◊ Weather reporting/alerting

H	◊ Building protection
H	◊ Respiration
H	Pre-identify shelters/recovery centers/other resources
H	Roofing materials/defensive spacing regulations
M	Community task forces for planning and education
M	Fuel/dead tree removal
H	Strategic pre-placement of firefighting equipment
H	Establish FEMA coordination processes based on ICS
H	Brush clearings around repeaters
H	Research new technologies for identifying/tracking fires
H	Procure/deploy backup communications equipment
H	"Red Tag" homes in advance of event
H	Provide fire-resistant gel to homeowners
H	Involve insurance agencies in mitigation programs
M	Clear out abandoned vehicles from oases
H	Code enforcement
M	Codes prohibiting fireworks
M	Fuel modification/removal
M	Evaluate building codes
M	Maintaining catch basins
OTHER HAZARDS	
M	Improve pipeline maintenance
M	Wetlands mosquito mitigation (West Nile Virus)
M	Insect control study
M	Increase County Vector Control capacities
H	General public drought awareness
H	◊ Lawn watering rotation
M	Develop County drought plan
NA	Mitigation of landslide-prone areas
NA	Develop winter storm sheltering plan
L	Ease permitting process for building transmission lines
L	Evaluate restrictions on dust/dirt/generating activities during wind seasons
NA	Rotational crop planning/soil stabilization
NA	Enhance agricultural checkpoint enforcement
M	Agriculture - funding of detection programs
M	Communications of pipeline maps (based on need to know)
M	Improved notification plan on runaway trains
H	Improve/maintain blackout notification plan.
H	Support business continuity planning for utility outages
H	Terrorism training/equipment for first responders
H	◊ Terrorism planning/coordination
H	◊ Staffing for terrorism mitigation

H	Create a SONGS regional planning group
H	◊ Include dirty bomb planning
H	Cooling stations - MOUs in place
L	Fire Ant eradication program
L	White Fly infestation abatement/eradication program
H	Develop plan for supplemental water sources
H	Public education on low water landscaping
NA	Salton Sea desalinization
M	Establish agriculture security standards (focus on water supply)
M	ID mutual aid agreements
H	Vulnerability assessment on fiber-optic cable
M	Upgrade valves on California aqueduct
	Public education
M	◊ Bi-lingual signs
H	◊ Power Outage information
M	Notification system for rail traffic - container contents
H	Control and release of terrorism intelligence
NA	Develop prison evacuation plan (shelter in place?)

Use the list and rankings to narrow down or identify "your" strategies. The mitigation strategy serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy includes the development of goals, objectives, and prioritized mitigation actions.

Goals are general guidelines that explain what you want to achieve. They are broad policy statements and are usually long-term and represent global visions, such as "Protect Existing Property."

Objectives define strategies or implementation steps to attain the identified goals. Unlike goals, objectives are specific, measurable, and may have a defined completion date. Objectives are more specific, such as "Increase the number of buildings protected from flooding."
The development of effective goals and objectives enables the planning team to evaluate the merits of alternative mitigation actions and the local conditions in which these activities would be pursued. A potential mitigation action that would support the goal and objective goal example above is "Acquire repetitive flood loss properties in the Acadia Woods Subdivision."

In the 2012 LHMP, each jurisdiction was required to develop a Mitigation Strategy Proposal based on one of the following:

1. The strategy, goal, or objective rating "High Priority" on the Local Jurisdiction Mitigation Strategies and Goals (WORKSHEET ABOVE)
2. A specifically identified strategy, goal, or objective that was developed as part of one of the working groups planning sessions such as the hospitals or agriculture
3. A specifically identified strategy, goal, or objective that was developed as part of one of

the jurisdiction's internal working group planning sessions

6. LOCAL JURISDICTION PROPOSED MITIGATION ACTION AND STRATEGY PROPOSAL

a. Instructions for Updating Jurisdictions and Special Districts: With your planning team, please review the table from # 5, and determine if your ranking from the 2012 LHMP remains the same.

Review the chosen Mitigation Strategy that your jurisdiction submitted. The updated plan **must** identify the completed, deleted, or deferred actions or activities from the previously approved plan as a benchmark for progress.

If the mitigation actions or activities remain unchanged from the previously approved plan, the updated plan **must** indicate why changes are not necessary. Further, the updated plan **shall** include in its prioritization any new mitigation actions identified since the previous plan was approved or through the plan update process.

b. Instructions for New Jurisdictions and Special Districts: With your planning team, Use the "High Priority" rated strategy, goal or objective as a starting point to determine your Mitigation Strategy Proposal.

7. LOCAL JURISDICTION DEVELOPMENT TRENDS QUESTIONNAIRE

LAND USE ISSUES - COMPLETE THE INFORMATION BELOW

This questionnaire identifies a comparison of specific land use issues between 2012, 2017 and 2022. The questionnaire also identifies the specific threat potential to the jurisdiction in relationship to residential and commercial structures along with critical facilities. This threat potential is focused on structural loss rather than dollar-value loss as it relates to the three main natural hazards – earthquakes, floods, and wildland fires. The determination of dollar-value loss relating to commercial and critical facilities was found to be very limited and a difficult task to establish. This issue will be addressed in future updates of the Plan.

The questionnaire also requires the jurisdiction to identify the process it will use to maintain their portion of the Plan.

LOCAL JURISDICTION DEVELOPMENT TRENDS QUESTIONNAIRE 2017

JURISDICTION: RIverside	DOES YOUR AGENCY HAVE RESPONSIBILITY FOR LAND USE AND/OR DEVELOPMENT ISSUES WITHIN YOUR JURISDICTIONAL BOUNDARIES? YES			
	2012 DATA	2017 DATA		2022
Current Population in Jurisdiction or Served	310,674	326,792*	Projected Population in Jurisdiction or Served - in 2022	337,786
Current Sq Miles in Jurisdiction or Served	81	81	Projected Sq Miles in Jurisdiction or Served - in 2022	81
Does Your Jurisdiction have any ordinances or regulations dealing with disaster mitigation, disaster preparation, or disaster response?	Yes	Yes	If yes, please list ordinance or regulation number. RMC 9.20	
What is the number one land issue your agency will face in the next five years	Affordable housing. Controlling commercial & residential developments to limit the number of vacant homes and commercial buildings. Dealing with aged and obsolete housing and commercial buildings.			
Approximate Number of Homes/Apts/etc.	98,444	107,325	Projected Number of Homes/Apts/etc.- in 2022	116,206
Approximate Total Residential Value	229,497,575.00		Projected Residential Total Value - in 2022	n/a
Approximate Number of Commercial Businesses	22,621		Projected Number of Commercial Businesses - in 2022	
Approximate Percentage of Homes/Apts/etc in flood hazard zones	35	35	Approximate Percentage of Homes/Apts/etc in flood hazard zones - in 2022	35
Approximate Percentage of Homes/Apts/etc in earthquake hazard zones	100	100	Approximate Percentage of Homes/Apts/etc in earthquake hazard zones - in 2022	100
Approximate Percentage of Homes/Apts/etc in wildland fire hazard zones	10	10	Approximate Percentage of Homes/Apts/etc in wildland fire hazard zones - in 2022	10
Approximate Percentage of Commercial Businesses in flood hazard zones	35	35	Approximate Percentage of Commercial Businesses in flood hazard zones - in 2022	35
Approximate Percentage of Commercial Businesses in earthquake hazard zones	100	100	Approximate Percentage of Commercial Businesses in earthquake hazard zones - in 2022	100
Approximate Percentage of Commercial Businesses in wildland fire hazard zones	10	10	Approximate Percentage of Commercial Businesses in wildland fire hazard zones - in 2022	10
Number of Critical Facilities in your Jurisdiction that are in flood hazard zones	40	40	Projected Number of Critical Facilities in your Jurisdiction that are in flood hazard zones - in 2022	
Number of Critical Facilities in your Jurisdiction that are in earthquake hazard zones	183	183	Number of Critical Facilities in your Jurisdiction that are in earthquake hazard zones - in 2022	
Number of Critical Facilities in your Jurisdiction that are in wildland fire hazard zones.	10	10	Number of Critical Facilities in your Jurisdiction that are in wildland fire hazard zones - in 2022	
Does your jurisdiction plan on participating in the County's on-going plan maintenance program every two years as described in Part I of the plan?	Yes		If not, how will your jurisdiction do plan maintenance?	
Will a copy of this plan be available for the various planning groups within your jurisdiction for use in future planning and budgeting purposes?				Yes

State of California, Department of Finance, *E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2016 and 2017.* Sacramento, California, May 2017.

APPENDIX C – CIP

https://www.riversideca.gov/finance/cip-overview.asp

APPENDIX D – 2016 LOCAL HAZARD MITIGATION SURVEY

SEE ATTACHMENTS

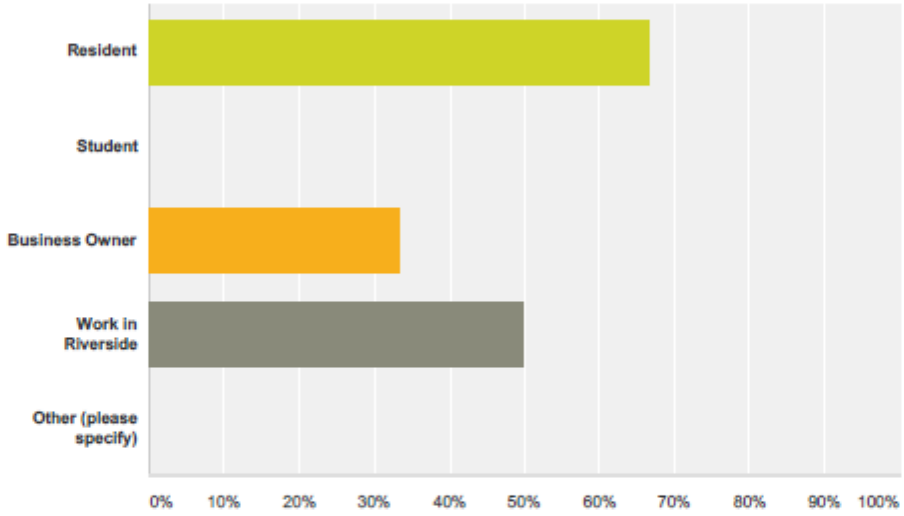
APPENDIX E – JUNE 2017 PUBLIC COMMENT

Public Comment Period June 7-14 Survey and Comment Results

2017 Local Hazard Mitigation Plan Draft Public Comment

Q1 Are you a resident, student, business owner or do you work within the City of Riverside?

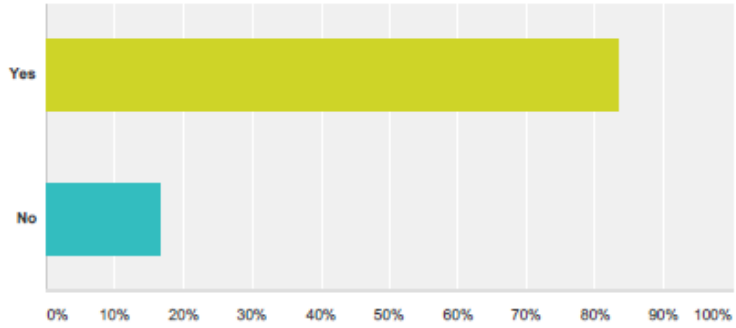
Answered: 6 Skipped: 0



Answer Choices	Responses	
Resident	66.67%	4
Student	0.00%	0
Business Owner	33.33%	2
Work in Riverside	50.00%	3
Other (please specify)	0.00%	0
Total Respondents: 6		

Q2 Did you participate in the initial Public Comment period in 2016 (January - February) seeking input on hazards and mitigation ideas?

Answered: 6 Skipped: 0

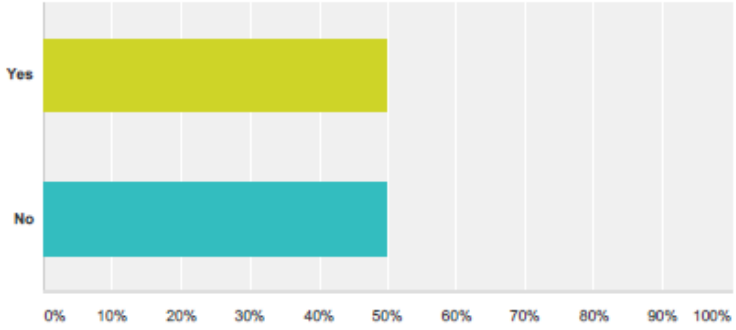


Answer Choices	Responses	
Yes	83.33%	5
No	16.67%	1
Total		6

2017 Local Hazard Mitigation Plan Draft Public Comment

Q3 Did you participate in community or partner meetings during the drafting of the Local Hazard Mitigation Plan?

Answered: 6 Skipped: 0

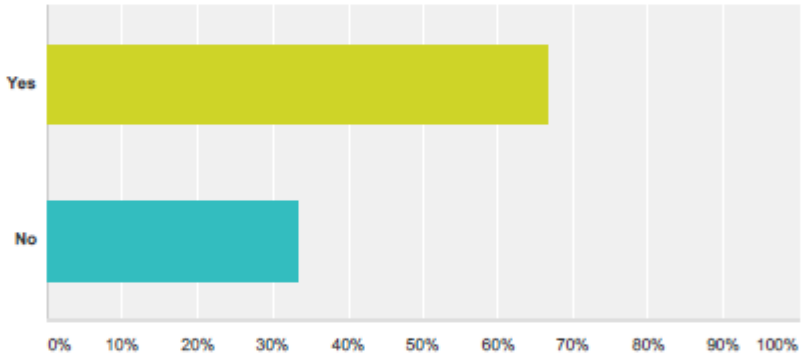


Answer Choices	Responses	
Yes	50.00%	3
No	50.00%	3
Total		6

2017 Local Hazard Mitigation Plan Draft Public Comment

Q4 Did you download or review a hard copy of 2017 LHMP?

Answered: 6 Skipped: 0



Answer Choices	Responses	
Yes	66.67%	4
No	33.33%	2
Total		6

2017 Local Hazard Mitigation Plan Draft Public Comment

Q5 Any additional comment on the 2017 Local Hazard Mitigation Plan Draft? If referring to plan please include Section Number.

Answered: 2 Skipped: 4

Para 1.2 (Page 9) Second paragraph. No identification of RCOE. The Riverside County Office of Education is located and operates in downtown Riverside and supports (1) regional learning center, (7) Head Starts Programs, (2) School of Career Education sites, as well as providing education at: (1) community school, (6) Welcome Back Kids Programs; and (2) Detention Centers within the city limits. Students that are in our Special Education program are unable to function in a regular school setting due to a severe physical disability, deafness, hard of hearing, blindness, emotional challenges and requires specialized support including medical equipment due to the nature of their disabilities and are at 14 sites throughout the City of Riverside. 6/12/2017 8:50 AM
None 6/11/2017 7:00 PM

2017 Local Hazard Mitigation Plan Draft Public Comment

Q6 Zip Code

Answered: 6 Skipped: 0

92508 – 6/14/2017 6:26 AM
92501 – 6/13/2017 9:17 AM
92502 – 6/12/2017 8:50 am
92508 – 6/11/2017 7:00 PM
92508 – 6/11/2017 6:30 PM
92504 – 6/11/2017 4:28 PM

2017 Local Hazard Mitigation Plan Draft Public Comment

Q7 Contact Info

Answered: 5 Skipped: 1

Diane Kwasman – 6/14/2017
Steve Lafond – 6/13/2017
Michael D'Amico – 6/12/2017
Marc Feldstein – 6/11/2017
Nathan Devlin – 6/11/2017

APPENDIX F – PLAN REVIEW TOOL/CROSSWALK

SEE ATTACHMENTS