
Hazus: Earthquake Global Risk Report

Region Name: ElsinoreCMJTsGIW

Earthquake Scenario: elsinorecmjtsgiwshaw_m7p77_se

Print Date: May 22, 2024

Disclaimer:

Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific earthquake. These results can be improved by using enhanced inventory, geotechnical, and observed ground motion data.

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General Description of the Region

Hazus-MH is a regional earthquake loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The earthquake loss estimates provided in this report was based on a region that includes 13 county(ies) from the following state(s):

California

Note:

Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 73,530.68 square miles and contains 5,610 census tracts. There are over 8,148 thousand households in the region which has a total population of 24,407,523 people. The distribution of population by Total Region and County is provided in Appendix B.

There are an estimated 6,951 thousand buildings in the region with a total building replacement value (excluding contents) of (millions of dollars). Approximately 90.00 % of the buildings (and % of the building value) are associated with residential housing.

The replacement value of the transportation and utility lifeline systems is estimated to be 295,097 and 194,066 (millions of dollars) , respectively.

Building and Lifeline Inventory

Building Inventory

Hazus estimates that there are 6,951 thousand buildings in the region which have an aggregate total replacement value of (millions of dollars) . Appendix B provides a general distribution of the building value by Total Region and County.

In terms of building construction types found in the region, wood frame construction makes up 87% of the building inventory. The remaining percentage is distributed between the other general building types.

Critical Facility Inventory

Hazus breaks critical facilities into two (2) groups: essential facilities and high potential loss facilities (HPL). Essential facilities include hospitals, medical clinics, schools, fire stations, police stations and emergency operations facilities. High potential loss facilities include dams, levees, military installations, nuclear power plants and hazardous material sites.

For essential facilities, there are 345 hospitals in the region with a total bed capacity of 63,645 beds. There are 7,824 schools, 1,397 fire stations, 472 police stations and 123 emergency operation facilities. With respect to high potential loss facilities (HPL), there are no dams identified within the inventory. The inventory also includes no hazardous material sites, no military installations and no nuclear power plants.

Transportation and Utility Lifeline Inventory

Within Hazus, the lifeline inventory is divided between transportation and utility lifeline systems. There are seven (7) transportation systems that include highways, railways, light rail, bus, ports, ferry and airports. There are six (6) utility systems that include potable water, wastewater, natural gas, crude & refined oil, electric power and communications. The lifeline inventory data are provided in Tables 1 and 2.

The total value of the lifeline inventory is over 489,163.00 (millions of dollars). This inventory includes over 12,749.29 miles of highways, 12,131 bridges, 267,256.02 miles of pipes.

Table 1: Transportation System Lifeline Inventory

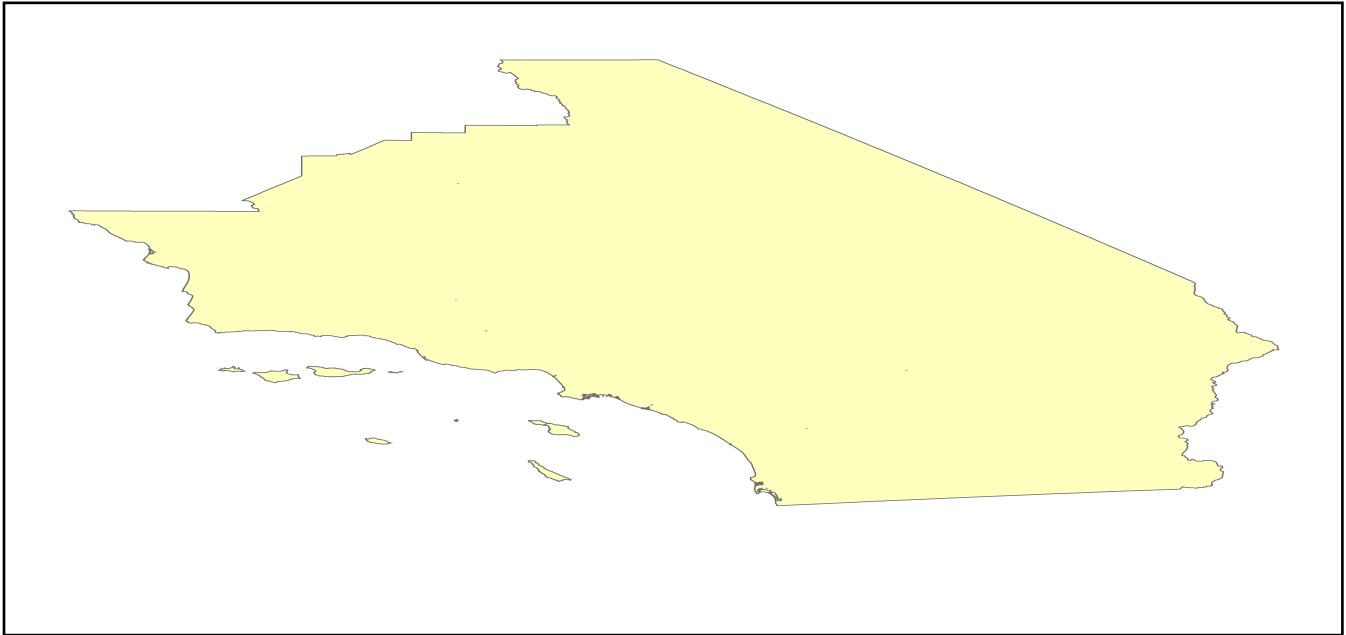
System	Component	# Locations/ # Segments	Replacement value (millions of dollars)
Highway	Bridges	12,131	68183.0231
	Segments	10,189	129524.7356
	Tunnels	62	553.5147
	Subtotal		198261.2734
Railways	Bridges	2,182	12415.5800
	Facilities	116	308.9080
	Segments	2,017	67063.3892
	Tunnels	0	0.0000
	Subtotal		79787.8772
Light Rail	Bridges	51	13.2750
	Facilities	149	3200.8000
	Segments	8	5399.1047
	Tunnels	0	0.0000
	Subtotal		8613.1797
Bus	Facilities	45	97.2975
	Subtotal		97.2975
Ferry	Facilities	22	29.2820
	Subtotal		29.2820
Port	Facilities	354	1349.3930
	Subtotal		1349.3930
Airport	Facilities	167	4844.7583
	Runways	188	2114.4318
	Subtotal		6959.1901
		Total	295,097.50

Table 2: Utility System Lifeline Inventory

System	Component	# Locations / Segments	Replacement value (millions of dollars)
Potable Water	Distribution Lines	NA	5307.8476
	Facilities	53	2082.5820
	Pipelines	0	0.0000
		Subtotal	7390.4296
Waste Water	Distribution Lines	NA	3184.7085
	Facilities	136	23385.4448
	Pipelines	0	0.0000
		Subtotal	26570.1533
Natural Gas	Distribution Lines	NA	2123.1390
	Facilities	44	1599.3257
	Pipelines	362	19300.5635
		Subtotal	23023.0282
Oil Systems	Facilities	68	8.0240
	Pipelines	0	0.0000
		Subtotal	8.0240
Electrical Power	Facilities	635	137018.3076
		Subtotal	137018.3076
Communication	Facilities	476	56.1680
		Subtotal	56.1680
	Total		194,066.10

Earthquake Scenario

Hazus uses the following set of information to define the earthquake parameters used for the earthquake loss estimate provided in this report.



Scenario Name	elsinorecmjtsgiwshaw_m7p77_se
Type of Earthquake	User-defined
Fault Name	NA
Historical Epicenter ID #	NA
Probabilistic Return Period	NA
Longitude of Epicenter	NA
Latitude of Epicenter	NA
Earthquake Magnitude	7.77
Depth (km)	NA
Rupture Length (Km)	NA
Rupture Orientation (degrees)	NA
Attenuation Function	NA

Direct Earthquake Damage

Building Damage

Hazus estimates that about 463,730 buildings will be at least moderately damaged. This is over 7.00 % of the buildings in the region. There are an estimated 21,226 buildings that will be damaged beyond repair. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the Hazus technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 below summarizes the expected damage by general building type.

Damage Categories by General Occupancy Type

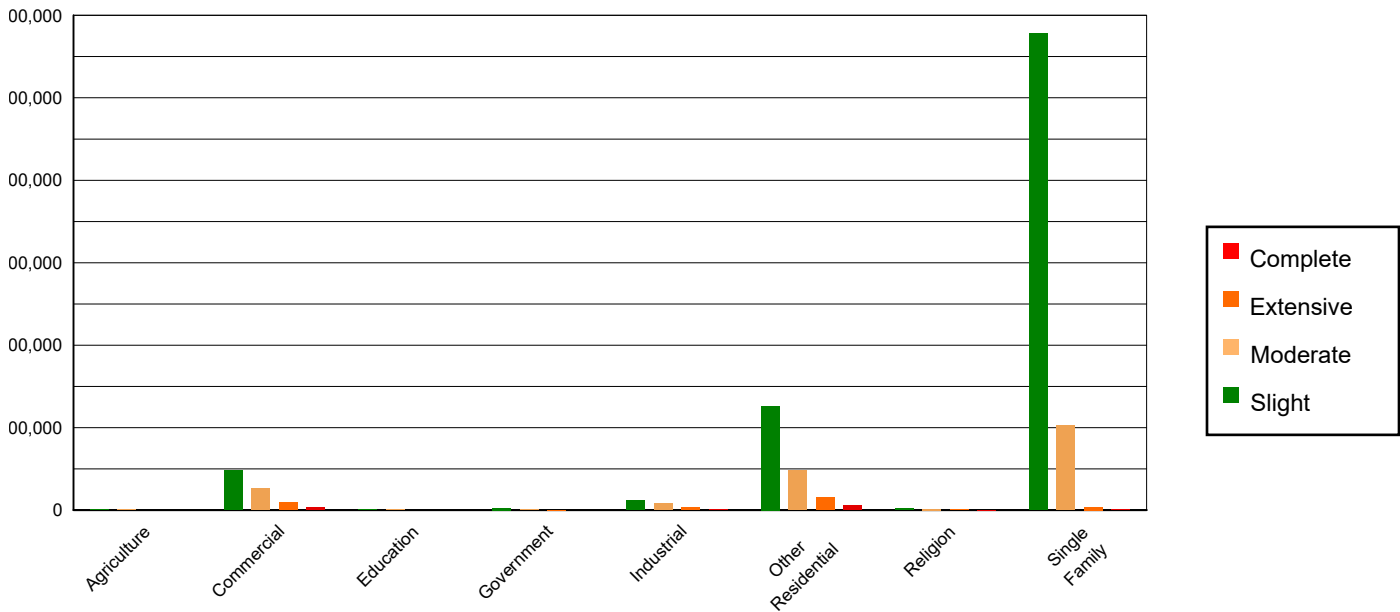


Table 3: Expected Building Damage by Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	15810.13	0.32	2032.43	0.13	840.17	0.22	257.23	0.38	104.04	0.49
Commercial	299499.12	6.05	96044.91	6.23	52666.37	14.02	18685.40	27.96	6345.21	29.89
Education	10405.75	0.21	1842.03	0.12	742.35	0.20	190.04	0.28	54.82	0.26
Government	28050.52	0.57	5160.15	0.33	2017.53	0.54	406.13	0.61	87.67	0.41
Industrial	75211.50	1.52	23265.91	1.51	15689.80	4.18	6751.34	10.10	2278.46	10.73
Other Residential	687537.14	13.90	252235.12	16.37	95546.12	25.43	31582.51	47.26	10609.12	49.98
Religion	15712.15	0.32	4529.54	0.29	2780.80	0.74	1091.71	1.63	376.80	1.78
Single Family	3814989.68	77.11	1155435.09	75.00	205398.12	54.67	7858.23	11.76	1370.87	6.46
Total	4,947,216		1,540,545		375,681		66,823		21,227	

Table 4: Expected Building Damage by Building Type (All Design Levels)

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Wood	4431725.64	89.58	1391722.44	90.34	244905.48	65.19	8235.30	12.32	667.39	3.14
Steel	68708.80	1.39	22743.45	1.48	22632.83	6.02	10914.05	16.33	3888.42	18.32
Concrete	72325.20	1.46	25642.20	1.66	17379.83	4.63	7861.57	11.76	2871.69	13.53
Precast	37037.46	0.75	11475.00	0.74	8497.19	2.26	2291.98	3.43	598.78	2.82
RM	221862.55	4.48	50064.25	3.25	28071.45	7.47	7254.36	10.86	1107.42	5.22
URM	5104.55	0.10	4024.55	0.26	8992.44	2.39	8392.14	12.56	4786.52	22.55
MH	110451.78	2.23	34873.28	2.26	45202.03	12.03	21873.19	32.73	7306.77	34.42
Total	4,947,216		1,540,545		375,681		66,823		21,227	

*Note:

- RM Reinforced Masonry
- URM Unreinforced Masonry
- MH Manufactured Housing

Essential Facility Damage

Before the earthquake, the region had 63,645 hospital beds available for use. On the day of the earthquake, the model estimates that only 40,569 hospital beds (64.00%) are available for use by patients already in the hospital and those injured by the earthquake. After one week, 76.00% of the beds will be back in service. By 30 days, 90.00% will be operational.

Table 5: Expected Damage to Essential Facilities

Classification	Total	# Facilities		
		At Least Moderate Damage > 50%	Complete Damage > 50%	With Functionality > 50% on day 1
Hospitals	345	73	4	228
Schools	7,824	2,020	113	5,039
EOCs	123	36	2	79
PoliceStations	472	90	3	346
FireStations	1,397	215	18	1,048

Transportation Lifeline Damage

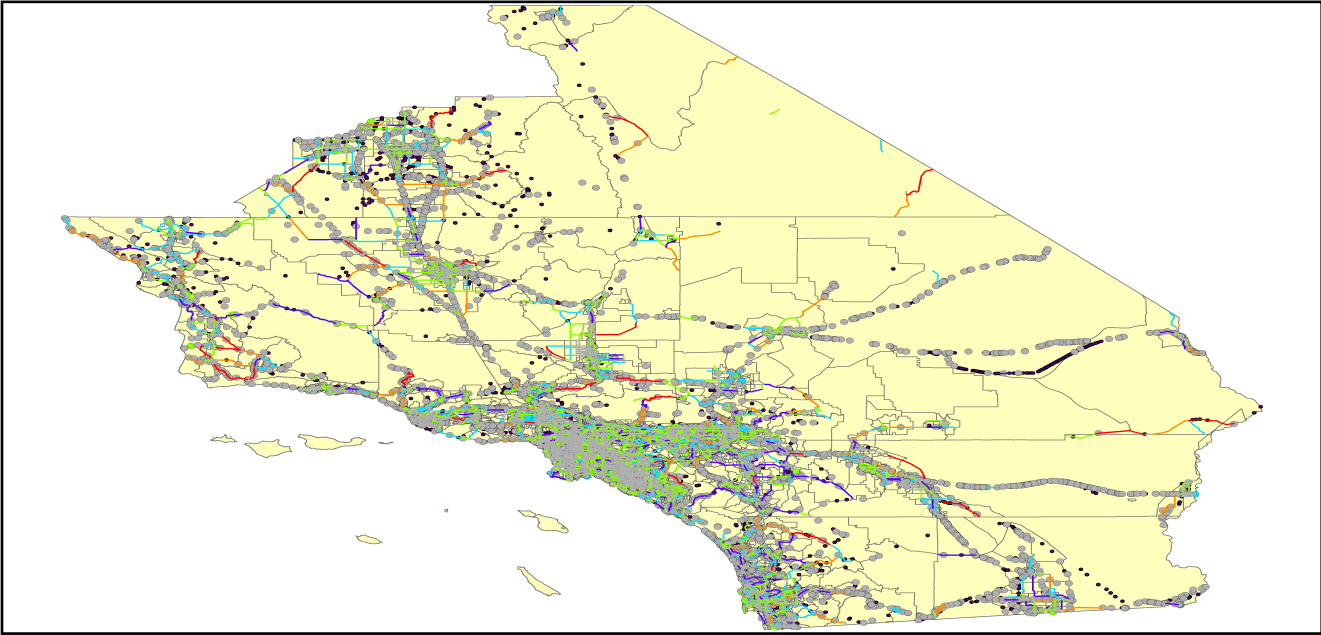


Table 6: Expected Damage to the Transportation Systems

System	Component	Number of Locations_				
		Locations/ Segments	With at Least Mod. Damage	With Complete Damage	With Functionality > 50 %	
					After Day 1	After Day 7
Highway	Segments	10,189	0	0	10,189	10,189
	Bridges	12,131	174	8	11,978	12,082
	Tunnels	62	0	0	62	62
Railways	Segments	2,017	0	0	2,017	2,017
	Bridges	2,182	0	0	2,182	2,182
	Tunnels	0	0	0	0	0
	Facilities	116	4	0	116	116
Light Rail	Segments	8	0	0	8	8
	Bridges	51	0	0	51	51
	Tunnels	0	0	0	0	0
	Facilities	149	0	0	149	149
Bus	Facilities	45	1	0	44	45
Ferry	Facilities	22	0	0	22	22
Port	Facilities	354	0	0	354	354
Airport	Facilities	167	4	0	166	167
	Runways	188	0	0	188	188

Table 6 provides damage estimates for the transportation system.

Note: Roadway segments, railroad tracks and light rail tracks are assumed to be damaged by ground failure only. If ground failure maps are not provided, damage estimates to these components will not be computed.

Tables 7-9 provide information on the damage to the utility lifeline systems. Table 7 provides damage to the utility system facilities. Table 8 provides estimates on the number of leaks and breaks by the pipelines of the utility systems. For electric power and potable water, Hazus performs a simplified system performance analysis. Table 9 provides a summary of the system performance information.

Table 7 : Expected Utility System Facility Damage

System	# of Locations				
	Total #	With at Least Moderate Damage	With Complete Damage	with Functionality > 50 %	
				After Day 1	After Day 7
Potable Water	53	7	0	42	53
Waste Water	136	16	0	95	136
Natural Gas	44	3	0	41	44
Oil Systems	68	10	0	54	68
Electrical Power	635	115	0	567	625
Communication	476	33	0	462	476

Table 8 : Expected Utility System Pipeline Damage (Site Specific)

System	Total Pipelines Length (miles)	Number of Leaks	Number of Breaks
Potable Water	164,907	30026	7506
Waste Water	98,944	15083	3771
Natural Gas	3,405	0	0
Oil	0	0	0

Table 9: Expected Potable Water and Electric Power System Performance

	Total # of Households	Number of Households without Service				
		At Day 1	At Day 3	At Day 7	At Day 30	At Day 90
Potable Water	8,148,162	1,734,559	1,675,169	1,559,421	933,273	35,786
Electric Power		1,062,613	692,823	297,170	31,563	1,409

Induced Earthquake Damage

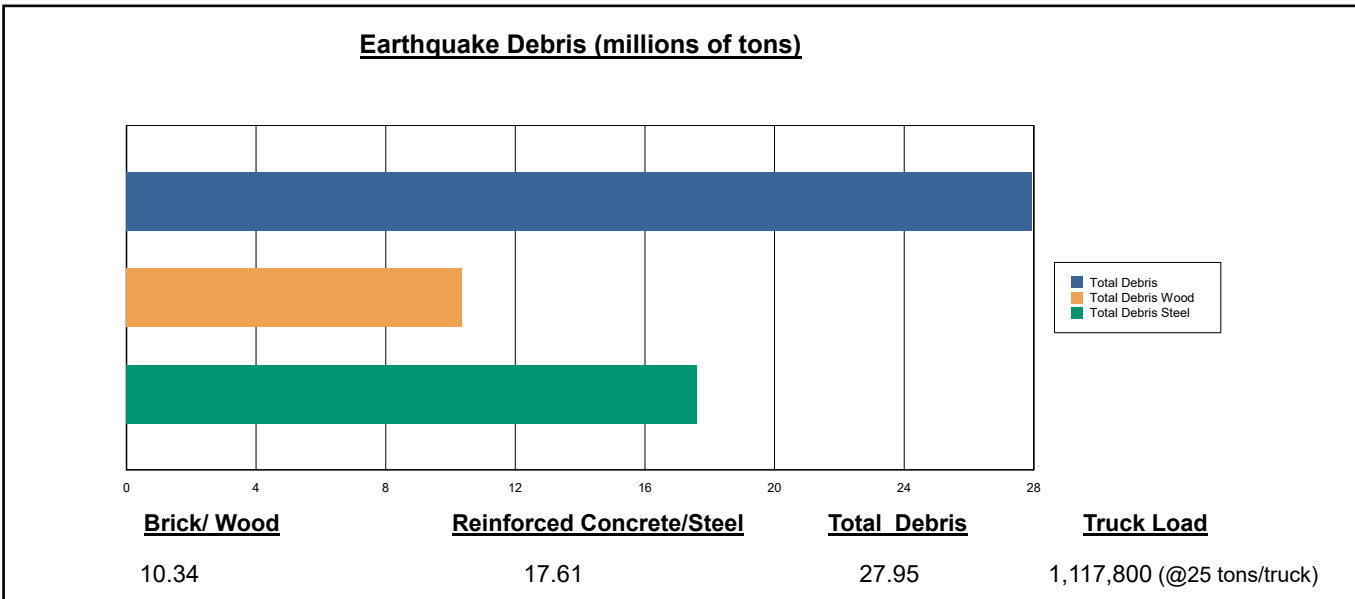
Fire Following Earthquake

Fires often occur after an earthquake. Because of the number of fires and the lack of water to fight the fires, they can often burn out of control. Hazus uses a Monte Carlo simulation model to estimate the number of ignitions and the amount of burnt area. For this scenario, the model estimates that there will be 110 ignitions that will burn about 1.35 sq. mi 0.00 % of the region's total area.) The model also estimates that the fires will displace about 15,201 people and burn about 1,575 (millions of dollars) of building value.

Debris Generation

Hazus estimates the amount of debris that will be generated by the earthquake. The model breaks the debris into two general categories: a) Brick/Wood and b) Reinforced Concrete/Steel. This distinction is made because of the different types of material handling equipment required to handle the debris.

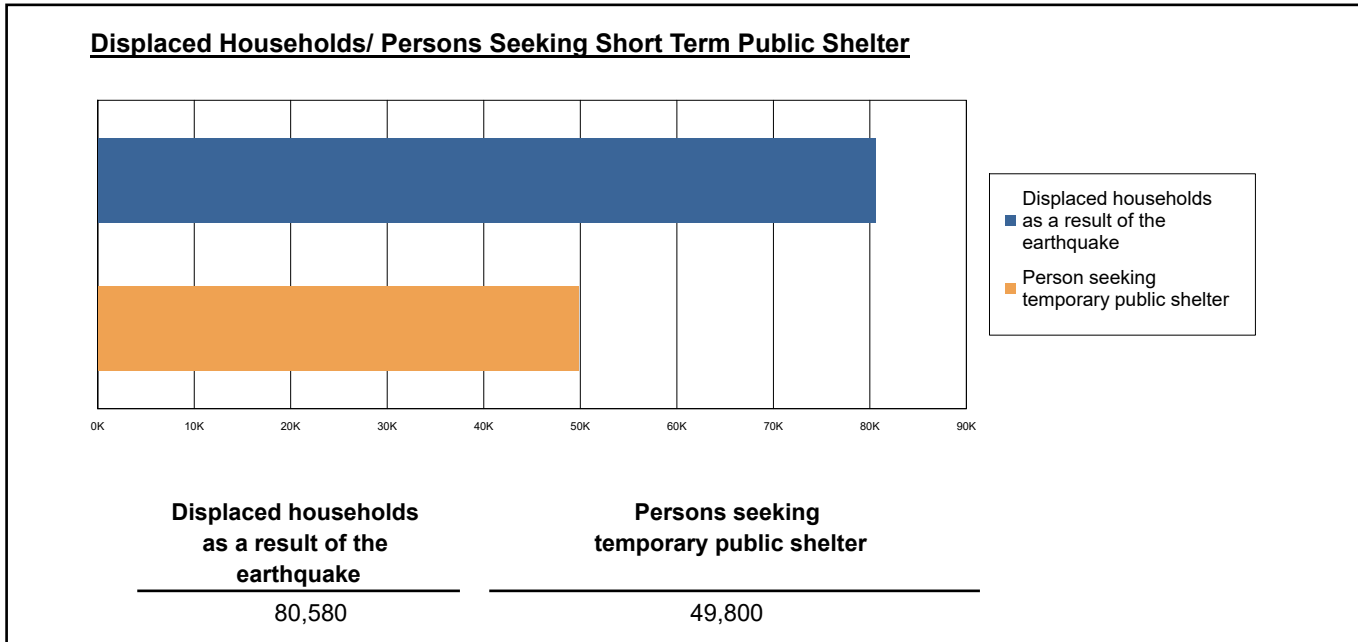
The model estimates that a total of 27,945,000 tons of debris will be generated. Of the total amount, Brick/Wood comprises 37.00% of the total, with the remainder being Reinforced Concrete/Steel. If the debris tonnage is converted to an estimated number of truckloads, it will require 1,117,800 truckloads (@25 tons/truck) to remove the debris generated by the earthquake.



Social Impact

Shelter Requirement

Hazus estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 80,580 households to be displaced due to the earthquake. Of these, 49,800 people (out of a total population of 24,407,523) will seek temporary shelter in public shelters.



Casualties

Hazus estimates the number of people that will be injured and killed by the earthquake. The casualties are broken down into four (4) severity levels that describe the extent of the injuries. The levels are described as follows;

- Severity Level 1: Injuries will require medical attention but hospitalization is not needed.
- Severity Level 2: Injuries will require hospitalization but are not considered life-threatening
- Severity Level 3: Injuries will require hospitalization and can become life threatening if not promptly treated.
- Severity Level 4: Victims are killed by the earthquake.

The casualty estimates are provided for three (3) times of day: 2:00 AM, 2:00 PM and 5:00 PM. These times represent the periods of the day that different sectors of the community are at their peak occupancy loads. The 2:00 AM estimate considers that the residential occupancy load is maximum, the 2:00 PM estimate considers that the educational, commercial and industrial sector loads are maximum and 5:00 PM represents peak commute time.

Table 10 provides a summary of the casualties estimated for this earthquake

Table 10: Casualty Estimates

		Level 1	Level 2	Level 3	Level 4
2 AM	Commercial	253.29	57.63	7.92	15.56
	Commuting	1.81	2.66	4.20	0.83
	Educational	0.00	0.00	0.00	0.00
	Hotels	7.67	1.32	0.14	0.26
	Industrial	341.08	80.67	10.90	21.30
	Other-Residential	9660.88	1888.92	204.96	393.75
	Single Family	4503.81	425.13	30.77	60.38
	Total	14,769	2,456	259	492
2 PM	Commercial	17328.26	3988.97	555.34	1080.48
	Commuting	16.33	23.98	37.82	7.46
	Educational	6656.33	1486.08	207.88	399.63
	Hotels	1.48	0.26	0.03	0.05
	Industrial	2512.39	595.68	81.11	156.89
	Other-Residential	2958.69	591.18	68.40	125.87
	Single Family	1277.02	127.66	10.23	19.12
	Total	30,750	6,814	961	1,789
5 PM	Commercial	12512.65	2922.01	413.99	792.36
	Commuting	319.02	467.33	738.21	145.52
	Educational	1484.73	347.65	51.18	97.31
	Hotels	2.30	0.40	0.04	0.08
	Industrial	1570.24	372.30	50.69	98.05
	Other-Residential	3688.42	736.82	84.71	155.86
	Single Family	1689.46	168.17	13.22	24.68
	Total	21,267	5,015	1,352	1,314

Economic Loss

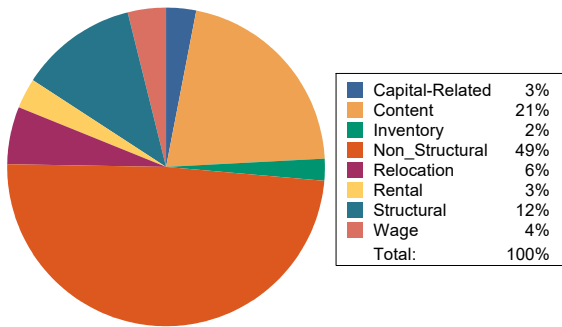
The total economic loss estimated for the earthquake is 185,967.09 (millions of dollars), which includes building and lifeline related losses based on the region's available inventory. The following three sections provide more detailed information about these losses.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake.

The total building-related losses were 167,640.89 (millions of dollars); 16 % of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 39 % of the total loss. Table 11 below provides a summary of the losses associated with the building damage.

Earthquake Losses by Loss Type (\$ millions)



Earthquake Losses by Occupancy Type (\$ millions)

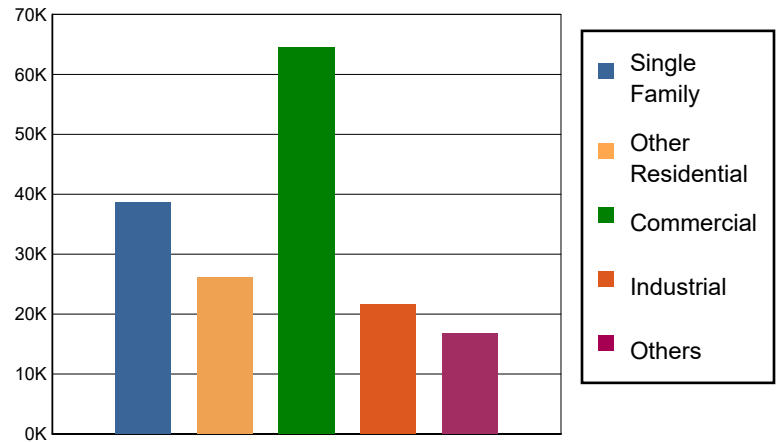


Table 11: Building-Related Economic Loss Estimates
(Millions of dollars)

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
Income Losses							
	Wage	0.0000	774.2399	5061.1238	303.1969	517.4871	6,656.0477
	Capital-Related	0.0000	329.3414	4558.3103	189.7534	154.4989	5,231.9040
	Rental	458.7363	1514.5927	2745.2461	155.0657	264.2970	5,137.9378
	Relocation	1560.4969	1108.6196	4057.2443	734.4003	2052.5689	9,513.3300
	Subtotal	2019.2332	3726.7936	16421.9245	1382.4163	2988.8519	26539.2195
Capital Stock Losses							
	Structural	4105.1615	2911.8528	8340.5004	2782.9945	1808.1125	19,948.6217
	Non_Structural	23975.1682	15721.9887	24703.4012	9835.3519	8098.0007	82,333.9107
	Content	8495.4311	3745.1004	12629.1182	6658.1733	3732.1592	35,259.9822
	Inventory	0.0000	0.0000	2455.4280	982.5185	121.2061	3,559.1526
	Subtotal	36575.7608	22378.9419	48128.4478	20259.0382	13759.4785	141101.6672
	Total	38594.99	26105.74	64550.37	21641.45	16748.33	167640.89

Transportation and Utility Lifeline Losses

For the transportation and utility lifeline systems, Hazus computes the direct repair cost for each component only. There are no losses computed by Hazus for business interruption due to lifeline outages. Tables 12 & 13 provide a detailed breakdown in the expected lifeline losses.

Table 12: Transportation System Economic Losses
(Millions of dollars)

System	Component	Inventory Value	Economic Loss	Loss Ratio (%)
Highway	Segments	129524.7356	0.0000	0.00
	Bridges	68183.0231	1679.8788	2.46
	Tunnels	553.5147	4.1456	0.75
	Subtotal	198261.2734	1684.0244	
Railways	Segments	67063.3892	0.0000	0.00
	Bridges	12415.5800	124.1208	1.00
	Tunnels	0.0000	0.0000	0.00
	Facilities	308.9080	44.9224	14.54
	Subtotal	79787.8772	169.0432	
Light Rail	Segments	5399.1047	0.0000	0.00
	Bridges	13.2750	0.1426	1.07
	Tunnels	0.0000	0.0000	0.00
	Facilities	3200.8000	527.5459	16.48
	Subtotal	8613.1797	527.6885	
Bus	Facilities	97.2975	11.0402	11.35
	Subtotal	97.2975	11.0402	
Ferry	Facilities	29.2820	2.6864	9.17
	Subtotal	29.2820	2.6864	
Port	Facilities	1349.3930	139.9456	10.37
	Subtotal	1349.3930	139.9456	
Airport	Facilities	4844.7583	605.0008	12.49
	Runways	2114.4318	0.0000	0.00
	Subtotal	6959.1901	605.0008	
Total		295,097.49	3,139.43	

Table 13: Utility System Economic Losses
(Millions of dollars)

System	Component	Inventory Value	Economic Loss	Loss Ratio (%)
Potable Water	Pipelines	0.0000	0.0000	0.00
	Facilities	2082.5820	154.6160	7.42
	Distribution Lines	5307.8476	135.1151	2.55
	Subtotal	7390.4296	289.7311	
Waste Water	Pipelines	0.0000	0.0000	0.00
	Facilities	23385.4448	1538.5078	6.58
	Distribution Lines	3184.7085	67.8718	2.13
	Subtotal	26570.1533	1606.3796	
Natural Gas	Pipelines	19300.5635	0.0000	0.00
	Facilities	1599.3257	37.3039	2.33
	Distribution Lines	2123.1390	23.2524	1.10
	Subtotal	23023.0282	60.5563	
Oil Systems	Pipelines	0.0000	0.0000	0.00
	Facilities	8.0240	0.6074	7.57
	Subtotal	8.0240	0.6074	
Electrical Power	Facilities	137018.3076	13225.4387	9.65
	Subtotal	137018.3076	13225.4387	
Communication	Facilities	56.1680	4.0465	7.20
	Subtotal	56.1680	4.0465	
	Total	194,066.11	15,186.76	

Appendix A: County Listing for the Region

Imperial,CA

Inyo,CA

Kern,CA

Kings,CA

Los Angeles,CA

Orange,CA

Riverside,CA

San Bernardino,CA

San Diego,CA

San Luis Obispo,CA

Santa Barbara,CA

Tulare,CA

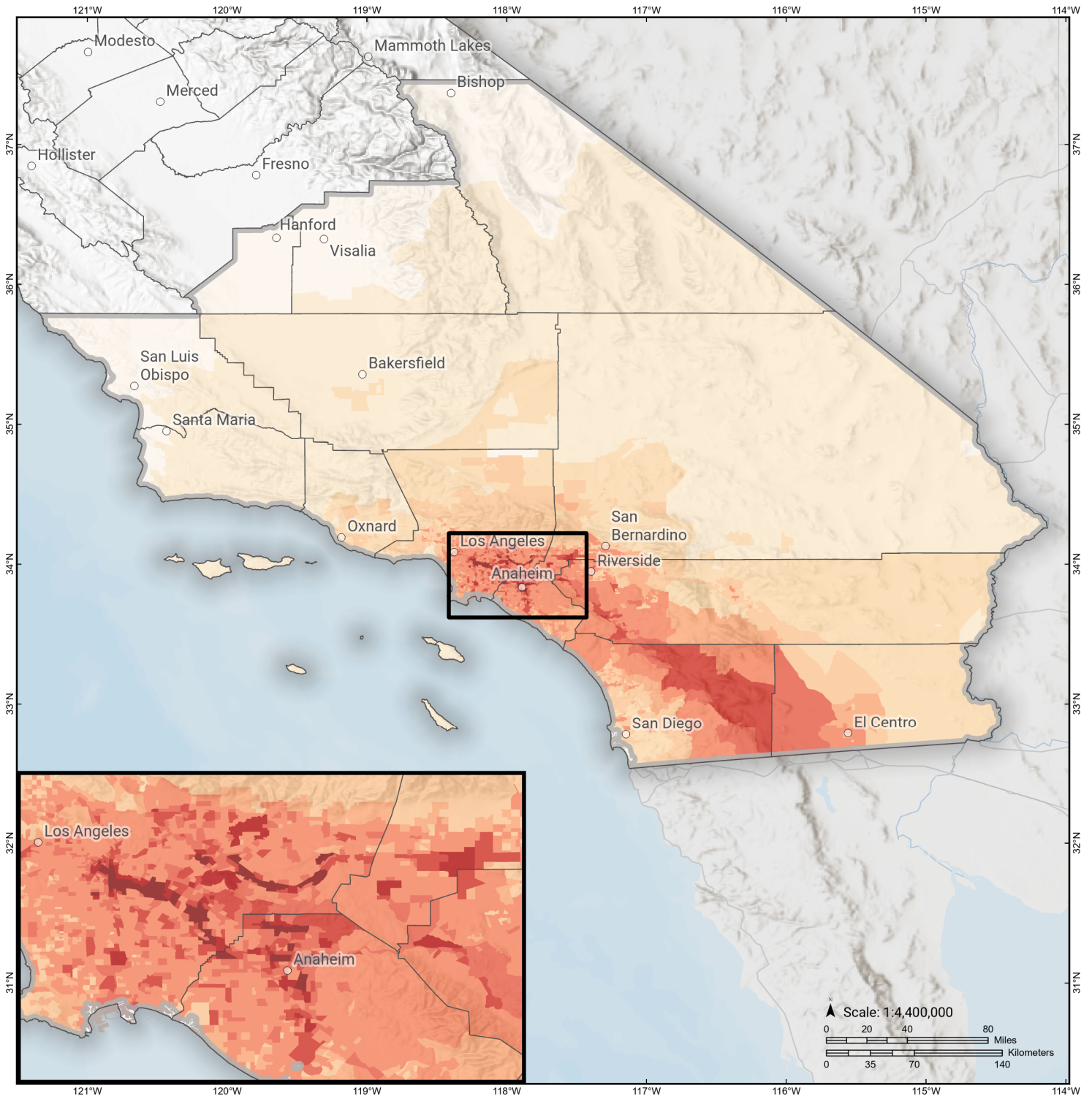
Ventura,CA

Appendix B: Regional Population and Building Value Data

State	County Name	Population	Building Value (millions of dollars)		
			Residential	Non-Residential	Total
California	Imperial	179,702	20,945	12,603	33,548
	Inyo	19,016	2,951	1,970	4,921
	Kern	909,235	87,567	59,168	146,736
	Kings	152,486	13,719	7,861	21,581
	Los Angeles	10,014,009	950,697	566,995	1,517,692
	Orange	3,186,989	363,381	176,806	540,188
	Riverside	2,418,185	281,482	137,249	418,731
	San Bernardino	2,181,654	225,045	152,557	377,602
	San Diego	3,298,634	375,834	193,238	569,072
	San Luis Obispo	282,424	41,720	20,896	62,616
	Santa Barbara	448,229	49,971	28,481	78,452
	Tulare	473,117	43,262	31,210	74,472
	Ventura	843,843	99,299	52,072	151,371
Total Region		24,407,523	2,555,873	1,441,106	3,996,982

Elsinore: CM+J+T+s+GI+W

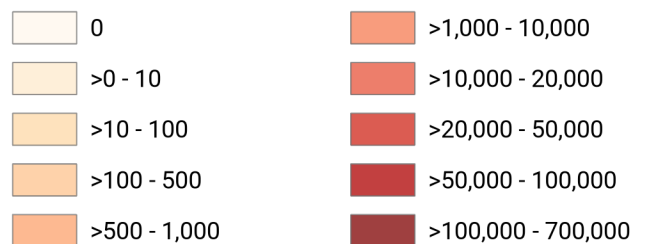
Debris Generated by Census Tract



Study Region: Elsinore: CM+J+T+s+GI+W
Scenario: elsinorecmjtgishaw_m7p77_se

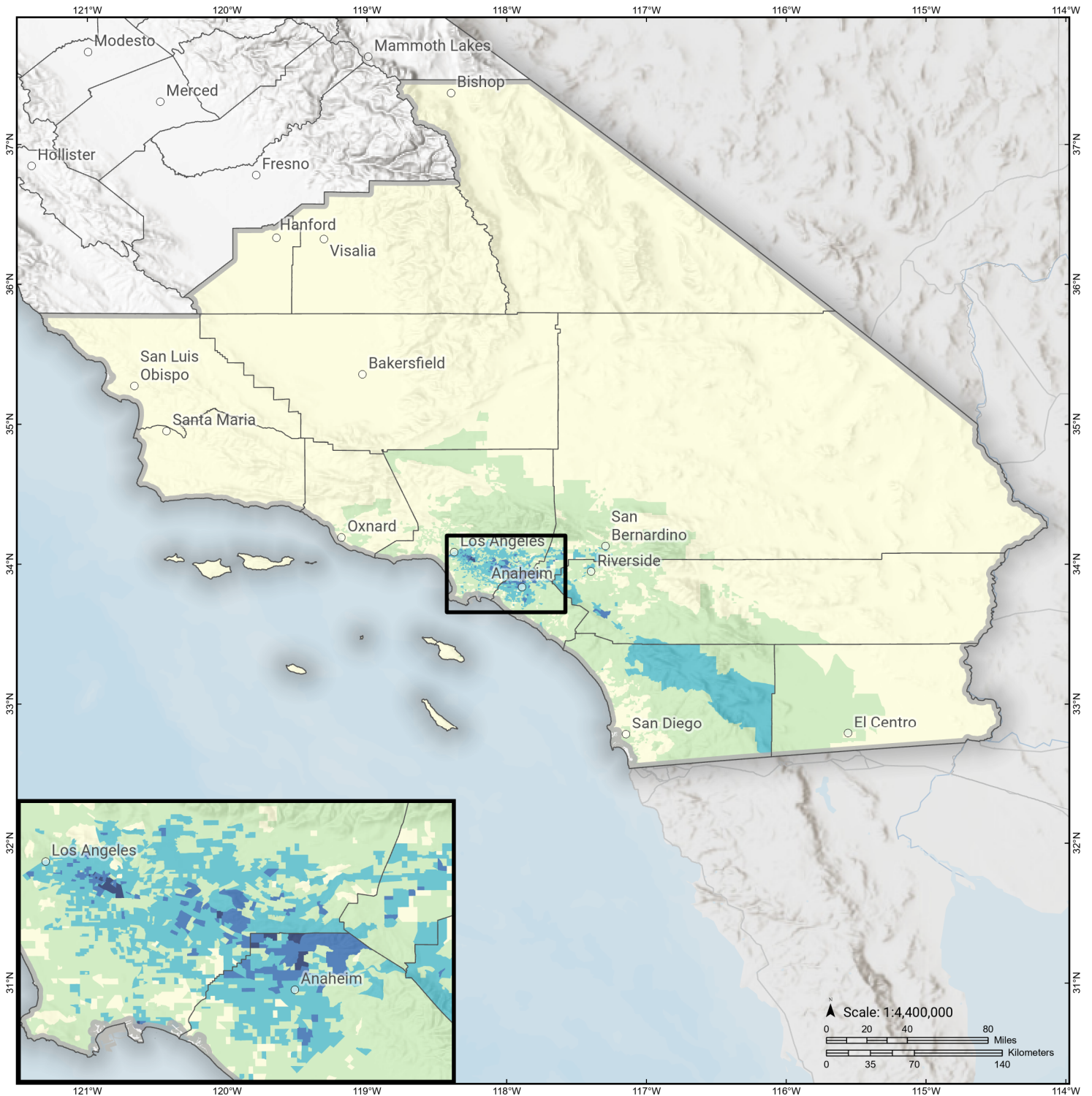


Debris Generated (in tons)



Elsinore: CM+J+T+s+GI+W

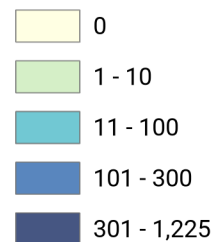
Displaced Households by Census Tract



Study Region: Elsinore: CM+J+T+s+GI+W
Scenario: elsinorecmjtgishaw_m7p77_se

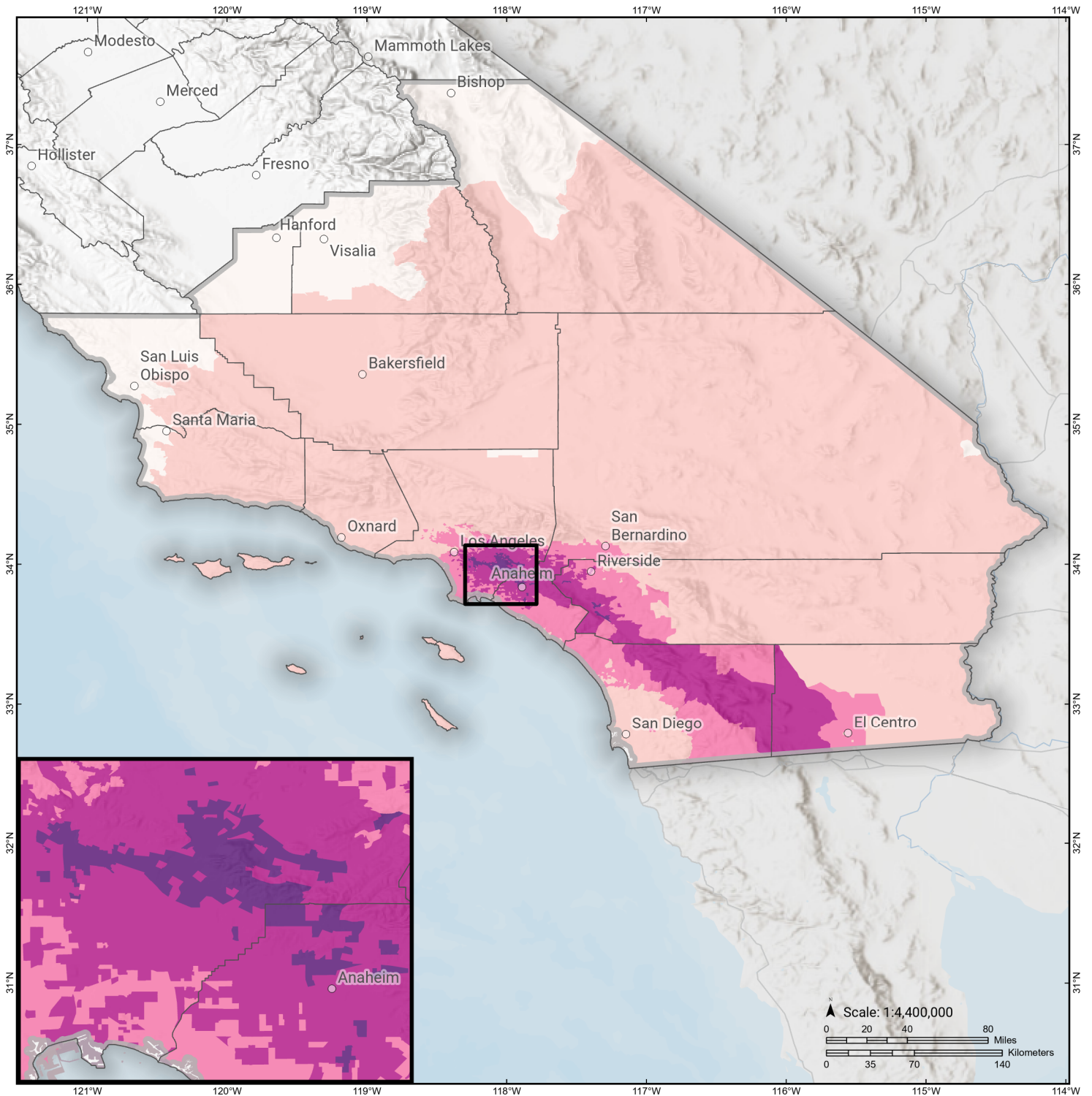


Displaced Households



Elsinore: CM+J+T+s+GI+W

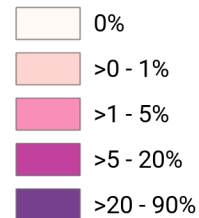
Loss Ratio by Census Tract



Study Region: Elsinore: CM+J+T+s+GI+W
Scenario: elsinorecmjtgishaw_m7p77_se

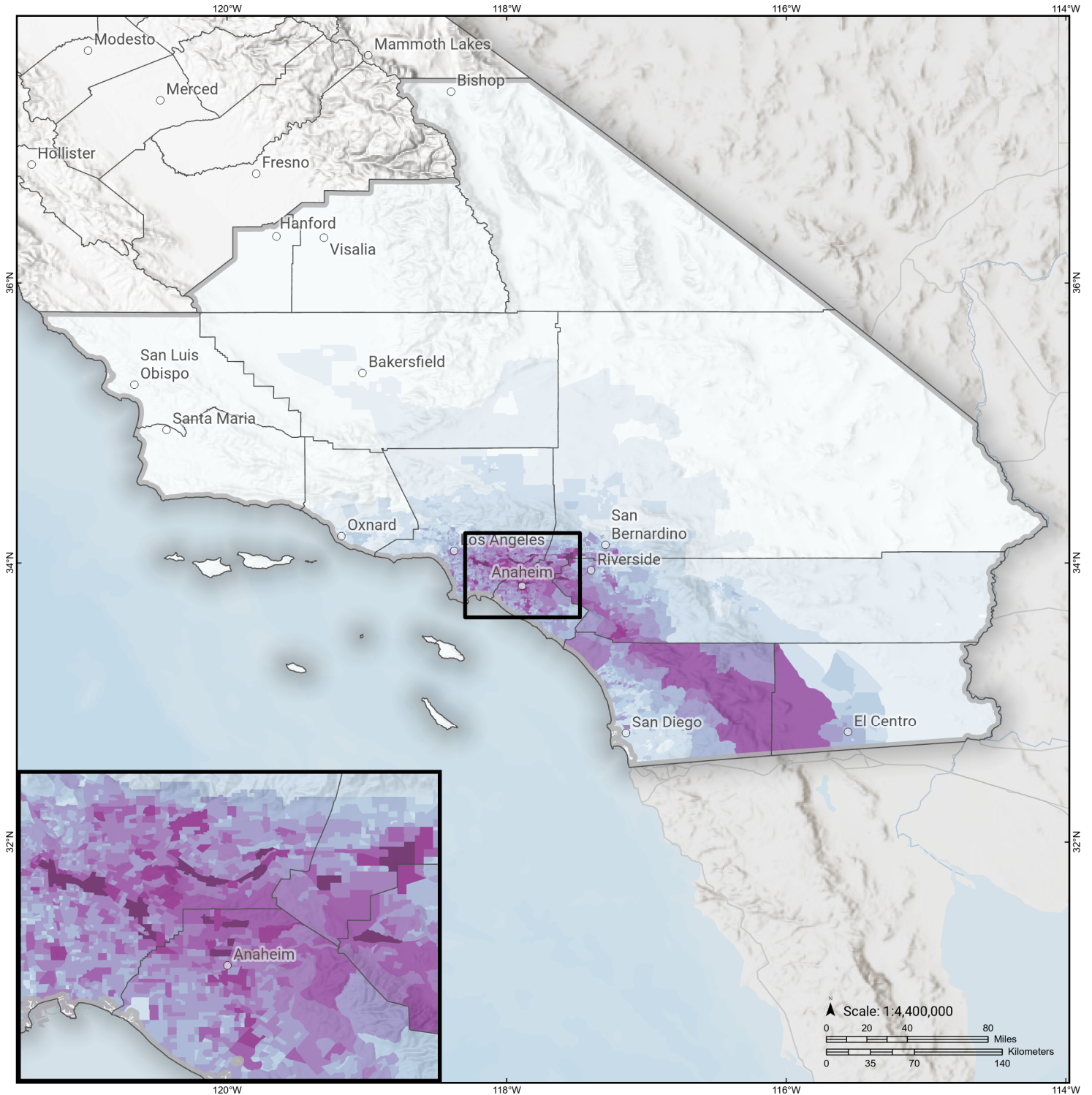


Loss Ratio (ratio of building related economic loss to exposed value of buildings)



Elsinore: CM+J+T+s+GI+W

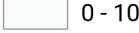
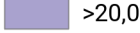








Total Building Related Economic Loss by Census Tract



Study Region: Elsinore: CM+J+T+s+GI+W
Scenario: elsinorecmjtgishaw_m7p77_se



Economic Loss (in thousands of USD \$)

 0 - 100	 >20,000 - 50,000
 >100 - 1,000	 >50,000 - 100,000
 >1,000 - 5,000	 >100,000 - 250,000
 >5,000 - 10,000	 >250,000 - 500,000
 >10,000 - 20,000	 >500,000 - 2,802,000

Building Damage by Count by General Occupancy

May 22, 2024

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
California						
Imperial						
<i>Agriculture</i>	109	24	5	0	0	138
<i>Commercial</i>	2,848	675	121	3	0	3,646
<i>Education</i>	92	7	0	0	0	99
<i>Government</i>	170	25	6	0	0	202
<i>Industrial</i>	428	123	28	1	0	580
<i>Religion</i>	238	48	8	0	0	295
<i>Other Residential</i>	4,651	1,506	1,100	255	6	7,518
<i>Single Family</i>	29,929	5,394	83	0	0	35,405
Inyo						
<i>Agriculture</i>	32	0	0	0	0	32
<i>Commercial</i>	721	0	0	0	0	721
<i>Education</i>	41	0	0	0	0	41
<i>Government</i>	101	0	0	0	0	101
<i>Industrial</i>	257	0	0	0	0	257
<i>Religion</i>	57	0	0	0	0	57
<i>Other Residential</i>	4,050	0	0	0	0	4,050
<i>Single Family</i>	4,446	0	0	0	0	4,446
Kern						

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
<i>Agriculture</i>	4,641	4	0	0	0	4,645
<i>Commercial</i>	15,554	13	1	0	0	15,567
<i>Education</i>	462	0	0	0	0	462
<i>Government</i>	443	0	0	0	0	443
<i>Industrial</i>	6,041	6	0	0	0	6,047
<i>Religion</i>	1,522	2	0	0	0	1,524
<i>Other Residential</i>	54,353	158	10	0	0	54,520
<i>Single Family</i>	205,089	50	0	0	0	205,139
Kings						
<i>Agriculture</i>	306	0	0	0	0	306
<i>Commercial</i>	2,318	0	0	0	0	2,318
<i>Education</i>	103	0	0	0	0	103
<i>Government</i>	72	0	0	0	0	72
<i>Industrial</i>	555	0	0	0	0	555
<i>Religion</i>	210	0	0	0	0	210
<i>Other Residential</i>	4,342	0	0	0	0	4,342
<i>Single Family</i>	36,245	0	0	0	0	36,245
Los Angeles						
<i>Agriculture</i>	1,263	396	226	105	42	2,032
<i>Commercial</i>	93,490	49,077	31,301	12,783	4,210	190,861
<i>Education</i>	3,853	971	471	150	40	5,486
<i>Government</i>	1,393	782	578	219	59	3,031
<i>Industrial</i>	24,848	12,066	9,694	4,825	1,693	53,126
<i>Religion</i>	4,662	2,830	2,002	866	291	10,651
<i>Other Residential</i>	264,249	161,708	41,081	10,720	3,913	481,671

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
Orange						
<i>Single Family</i>	1,168,669	518,417	110,567	4,733	753	1,803,140
<i>Agriculture</i>	422	349	231	92	41	1,135
<i>Commercial</i>	26,463	21,443	13,758	4,768	1,908	68,340
<i>Education</i>	1,218	451	175	32	14	1,890
<i>Government</i>	238	188	154	53	18	650
<i>Industrial</i>	6,330	5,714	4,441	1,748	562	18,795
<i>Religion</i>	712	630	460	178	77	2,057
<i>Other Residential</i>	33,965	26,353	14,174	8,401	2,826	85,718
<i>Single Family</i>	372,013	283,111	49,065	1,656	367	706,212
Riverside						
<i>Agriculture</i>	1,287	326	87	11	3	1,713
<i>Commercial</i>	28,334	12,020	5,003	825	174	46,357
<i>Education</i>	673	240	70	7	1	990
<i>Government</i>	5,583	984	503	94	11	7,175
<i>Industrial</i>	3,471	2,054	774	98	12	6,409
<i>Religion</i>	792	345	147	29	6	1,319
<i>Other Residential</i>	55,474	28,869	25,571	9,307	3,578	122,799
<i>Single Family</i>	371,732	195,056	37,298	1,174	195	605,455
San Bernardino						
<i>Agriculture</i>	952	581	224	41	17	1,815
<i>Commercial</i>	30,150	7,684	1,890	268	49	40,041
<i>Education</i>	862	104	18	1	0	985
<i>Government</i>	985	205	45	3	0	1,238
<i>Industrial</i>	6,767	2,026	599	72	10	9,474

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
<i>Religion</i>	1,806	382	114	16	2	2,320
<i>Other Residential</i>	73,366	16,921	6,531	1,769	234	98,821
<i>Single Family</i>	425,136	93,544	6,483	167	37	525,367
San Diego						
<i>Agriculture</i>	1,772	341	67	9	1	2,190
<i>Commercial</i>	56,865	4,888	573	38	4	62,369
<i>Education</i>	1,857	68	7	0	0	1,932
<i>Government</i>	17,195	2,961	730	38	0	20,924
<i>Industrial</i>	12,997	1,164	144	8	0	14,313
<i>Religion</i>	2,733	278	48	3	0	3,063
<i>Other Residential</i>	103,218	16,128	7,030	1,130	52	127,559
<i>Single Family</i>	703,063	57,911	1,899	128	19	763,020
San Luis Obispo						
<i>Agriculture</i>	421	0	0	0	0	421
<i>Commercial</i>	9,375	0	0	0	0	9,375
<i>Education</i>	182	0	0	0	0	182
<i>Government</i>	185	0	0	0	0	185
<i>Industrial</i>	2,556	0	0	0	0	2,556
<i>Religion</i>	360	0	0	0	0	360
<i>Other Residential</i>	20,216	0	0	0	0	20,216
<i>Single Family</i>	85,639	0	0	0	0	85,639
Santa Barbara						
<i>Agriculture</i>	464	0	0	0	0	464
<i>Commercial</i>	9,818	2	0	0	0	9,820
<i>Education</i>	299	0	0	0	0	299

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
<i>Government</i>	239	0	0	0	0	239
<i>Industrial</i>	2,839	1	0	0	0	2,840
<i>Religion</i>	621	0	0	0	0	621
<i>Other Residential</i>	24,098	13	0	0	0	24,111
<i>Single Family</i>	98,980	2	0	0	0	98,982
Tulare						
<i>Agriculture</i>	3,555	0	0	0	0	3,555
<i>Commercial</i>	8,873	0	0	0	0	8,873
<i>Education</i>	269	0	0	0	0	269
<i>Government</i>	461	0	0	0	0	461
<i>Industrial</i>	2,148	0	0	0	0	2,148
<i>Religion</i>	827	0	0	0	0	827
<i>Other Residential</i>	20,022	0	0	0	0	20,022
<i>Single Family</i>	112,034	0	0	0	0	112,034
Ventura						
<i>Agriculture</i>	586	11	1	0	0	598
<i>Commercial</i>	14,691	243	19	0	0	14,953
<i>Education</i>	494	2	0	0	0	497
<i>Government</i>	986	14	1	0	0	1,001
<i>Industrial</i>	5,976	112	9	0	0	6,097
<i>Religion</i>	1,172	14	1	0	0	1,187
<i>Other Residential</i>	25,533	581	50	0	0	26,163
<i>Single Family</i>	202,014	1,952	2	0	0	203,968
Total	4,947,216	1,540,545	375,681	66,823	21,227	6,951,492

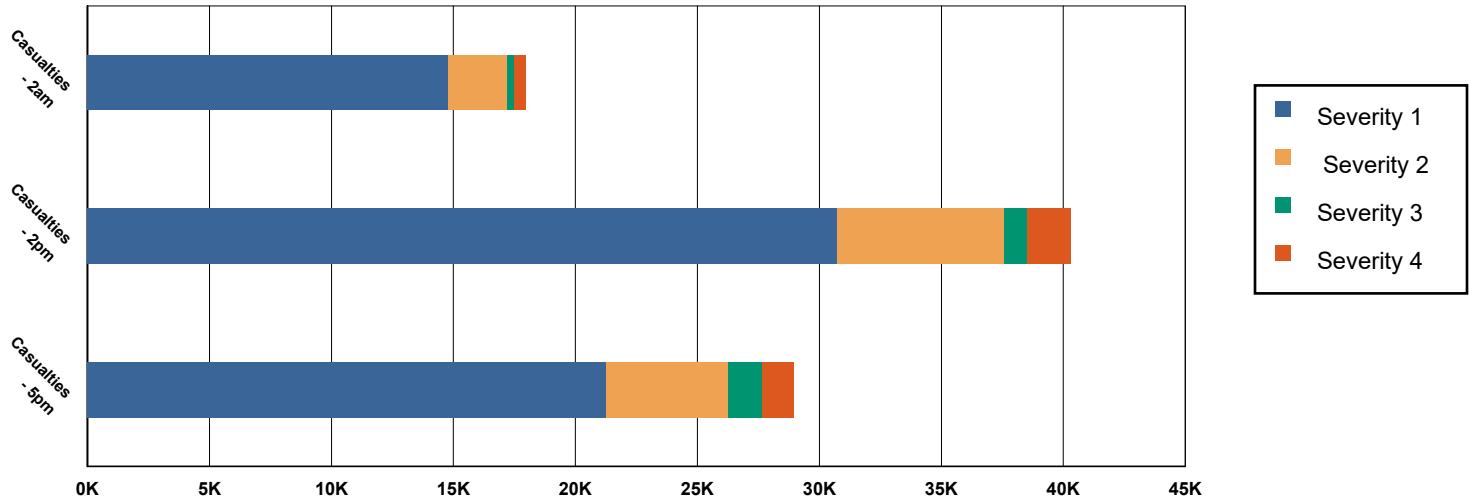
	# of Buildings					
	None	Slight	Moderate	Extensive	Complete	Total
Region Total	4,947,216	1,540,545	375,681	66,823	21,227	6,951,492

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Casualties Summary Report

May 22, 2024

Region Total Casualties



Injury Severity Level

Severity 1	Severity 2	Severity 3	Severity 4	Total
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California

Imperial

Casualties - 2am

	Severity 1	Severity 2	Severity 3	Severity 4	Total
Commercial	0	0	0	0	0
Other-Residential	14	1	0	0	15
Educational	0	0	0	0	0
Single Family	11	0	0	0	11
Commuting	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Total Casualties - 2am	25	1	0	0	26

Casualties - 2pm

Educational	3	0	0	0	3
Industrial	1	0	0	0	1
Hotels	0	0	0	0	0
Other-Residential	4	0	0	0	4
Single Family	3	0	0	0	3
Commercial	16	1	0	0	17
Commuting	0	0	0	0	0

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
California					
Imperial					
Total Casualties - 2pm	27	2	0	0	29
Casualties - 5pm					
Single Family	4	0	0	0	4
Other-Residential	5	0	0	0	5
Commercial	11	1	0	0	11
Commuting	0	0	1	0	2
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	1	0	0	0	1
Total Casualties - 5pm	20	2	1	0	23
Inyo					
Casualties - 2am					
Single Family	0	0	0	0	0
Commercial	0	0	0	0	0
Commuting	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Other-Residential	0	0	0	0	0
Industrial	0	0	0	0	0
Total Casualties - 2am	0	0	0	0	0
Casualties - 2pm					
Industrial	0	0	0	0	0
Hotels	0	0	0	0	0
Commercial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Commuting	0	0	0	0	0
Educational	0	0	0	0	0
Total Casualties - 2pm	0	0	0	0	0
Casualties - 5pm					
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Commuting	0	0	0	0	0
Industrial	0	0	0	0	0
Total Casualties - 5pm	0	0	0	0	0
Kern					
Casualties - 2am					
Commercial	0	0	0	0	0

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
California					
Kern					
Casualties - 2am					
<i>Commuting</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
Total Casualties - 2am	0	0	0	0	0
Casualties - 2pm					
<i>Educational</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
Total Casualties - 2pm	0	0	0	0	0
Casualties - 5pm					
<i>Single Family</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
Total Casualties - 5pm	0	0	0	0	0
Kings					
Casualties - 2am					
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
Total Casualties - 2am	0	0	0	0	0
Casualties - 2pm					
<i>Single Family</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
California					
Kings					
Casualties - 2pm					
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
Total Casualties - 2pm	0	0	0	0	0
Casualties - 5pm					
<i>Single Family</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
Total Casualties - 5pm	0	0	0	0	0
Los Angeles					
Casualties - 2am					
<i>Hotels</i>	6	1	0	0	7
<i>Industrial</i>	223	54	7	14	298
<i>Educational</i>	0	0	0	0	0
<i>Single Family</i>	2,355	238	17	33	2,643
<i>Commuting</i>	1	1	2	0	4
<i>Other-Residential</i>	6,127	1,224	149	291	7,791
<i>Commercial</i>	169	39	5	10	224
Total Casualties - 2am	8,881	1,557	180	348	10,967
Casualties - 2pm					
<i>Industrial</i>	1,644	399	54	105	2,201
<i>Other-Residential</i>	1,948	402	52	96	2,498
<i>Commercial</i>	11,758	2,761	381	739	15,639
<i>Commuting</i>	8	11	18	4	40
<i>Educational</i>	4,296	982	138	264	5,680
<i>Single Family</i>	676	72	6	10	764
<i>Hotels</i>	1	0	0	0	1
Total Casualties - 2pm	20,331	4,627	648	1,218	26,825
Casualties - 5pm					
<i>Other-Residential</i>	2,391	490	63	117	3,061
<i>Industrial</i>	1,027	249	34	66	1,376
<i>Commuting</i>	151	216	348	68	783
<i>Single Family</i>	888	94	7	13	1,003
<i>Commercial</i>	8,550	2,036	287	547	11,420
<i>Hotels</i>	2	0	0	0	2
<i>Educational</i>	947	230	34	65	1,276
Total Casualties - 5pm	13,956	3,317	773	876	18,921

Injury Severity Level

Severity 1 Severity 2 Severity 3 Severity 4 Total

California

Orange

Casualties - 2am

	Severity 1	Severity 2	Severity 3	Severity 4	Total
<i>Hotels</i>	2	0	0	0	2
<i>Commuting</i>	1	1	1	0	3
<i>Educational</i>	0	0	0	0	0
<i>Industrial</i>	103	25	3	7	138
<i>Other-Residential</i>	1,888	389	41	77	2,395
<i>Commercial</i>	61	15	2	5	83
<i>Single Family</i>	1,090	109	9	18	1,226
Total Casualties - 2am	3,144	539	57	107	3,847

Casualties - 2pm

<i>Industrial</i>	755	182	25	49	1,012
<i>Other-Residential</i>	523	108	12	22	664
<i>Commuting</i>	5	7	11	2	26
<i>Commercial</i>	4,015	1,021	156	305	5,497
<i>Single Family</i>	295	31	3	5	335
<i>Hotels</i>	0	0	0	0	0
<i>Educational</i>	2,043	471	68	132	2,714
Total Casualties - 2pm	7,637	1,820	275	516	10,247

Casualties - 5pm

<i>Hotels</i>	0	0	0	0	1
<i>Educational</i>	512	116	17	32	676
<i>Commuting</i>	100	145	230	45	520
<i>Single Family</i>	408	43	4	7	463
<i>Commercial</i>	2,919	744	114	220	3,998
<i>Other-Residential</i>	706	147	16	30	899
<i>Industrial</i>	472	114	16	31	632
Total Casualties - 5pm	5,118	1,308	397	366	7,189

Riverside

Casualties - 2am

<i>Industrial</i>	10	1	0	0	11
<i>Commercial</i>	10	2	0	0	13
<i>Other-Residential</i>	1,237	230	13	22	1,502
<i>Educational</i>	0	0	0	0	0
<i>Commuting</i>	0	1	1	0	2
<i>Single Family</i>	719	63	4	7	793
<i>Hotels</i>	0	0	0	0	0
Total Casualties - 2am	1,977	296	18	30	2,321

Casualties - 2pm

<i>Commercial</i>	710	120	13	25	868
<i>Other-Residential</i>	367	67	4	7	444
<i>Educational</i>	216	26	2	4	248
<i>Single Family</i>	210	19	1	3	233

Injury Severity Level

Severity 1 Severity 2 Severity 3 Severity 4 Total

California

Riverside

Casualties - 2pm

<i>Commuting</i>	3	5	7	1	17
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	70	10	1	2	83
Total Casualties - 2pm	1,575	248	28	41	1,893

Casualties - 5pm

<i>Industrial</i>	44	7	1	1	52
<i>Other-Residential</i>	444	83	5	8	540
<i>Educational</i>	15	1	0	0	16
<i>Single Family</i>	269	25	2	3	298
<i>Hotels</i>	0	0	0	0	0
<i>Commercial</i>	510	85	9	17	620
<i>Commuting</i>	57	91	135	27	310
Total Casualties - 5pm	1,338	291	151	57	1,836

San Bernardino

Casualties - 2am

<i>Hotels</i>	0	0	0	0	0
<i>Single Family</i>	224	13	1	2	239
<i>Commercial</i>	4	1	0	0	5
<i>Commuting</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Other-Residential</i>	264	33	2	4	303
<i>Industrial</i>	4	1	0	0	5
Total Casualties - 2am	496	47	3	6	551

Casualties - 2pm

<i>Industrial</i>	32	4	0	1	38
<i>Hotels</i>	0	0	0	0	0
<i>Commuting</i>	0	1	1	0	2
<i>Other-Residential</i>	73	9	1	1	85
<i>Educational</i>	64	5	0	0	70
<i>Single Family</i>	60	4	0	1	64
<i>Commercial</i>	265	39	4	8	316
Total Casualties - 2pm	495	63	7	11	575

Casualties - 5pm

<i>Other-Residential</i>	96	12	1	1	111
<i>Commercial</i>	194	29	3	6	233
<i>Single Family</i>	82	5	0	1	88
<i>Educational</i>	5	0	0	0	6
<i>Hotels</i>	0	0	0	0	0
<i>Commuting</i>	9	13	21	4	47
<i>Industrial</i>	20	3	0	0	24

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
California					
San Bernardino					
Total Casualties - 5pm	407	63	25	12	508
San Diego					
Casualties - 2am					
<i>Commercial</i>	9	1	0	0	10
<i>Other-Residential</i>	129	11	0	0	141
<i>Commuting</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Single Family</i>	102	3	0	0	106
<i>Industrial</i>	1	0	0	0	1
<i>Hotels</i>	0	0	0	0	0
Total Casualties - 2am	241	15	1	1	258
Casualties - 2pm					
<i>Hotels</i>	0	0	0	0	0
<i>Educational</i>	32	2	0	0	34
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	561	46	2	4	612
<i>Other-Residential</i>	43	4	0	0	48
<i>Single Family</i>	32	1	0	0	34
<i>Industrial</i>	10	1	0	0	10
Total Casualties - 2pm	678	54	2	4	739
Casualties - 5pm					
<i>Other-Residential</i>	46	4	0	0	50
<i>Commercial</i>	326	26	1	2	356
<i>Commuting</i>	2	2	4	1	9
<i>Single Family</i>	37	1	0	0	38
<i>Educational</i>	6	0	0	0	6
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	6	0	0	0	6
Total Casualties - 5pm	422	35	5	3	465
San Luis Obispo					
Casualties - 2am					
<i>Commercial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
Total Casualties - 2am	0	0	0	0	0
Casualties - 2pm					
<i>Single Family</i>	0	0	0	0	0

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
California					
San Luis Obispo					
Casualties - 2pm					
<i>Educational</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
Total Casualties - 2pm	0	0	0	0	0
Casualties - 5pm					
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
Total Casualties - 5pm	0	0	0	0	0
Santa Barbara					
Casualties - 2am					
<i>Industrial</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
Total Casualties - 2am	0	0	0	0	0
Casualties - 2pm					
<i>Commercial</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
Total Casualties - 2pm	0	0	0	0	0
Casualties - 5pm					
<i>Other-Residential</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
California					
Santa Barbara					
Casualties - 5pm					
<i>Industrial</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
Total Casualties - 5pm	0	0	0	0	0
Tulare					
Casualties - 2am					
<i>Commercial</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
Total Casualties - 2am	0	0	0	0	0
Casualties - 2pm					
<i>Industrial</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
Total Casualties - 2pm	0	0	0	0	0
Casualties - 5pm					
<i>Other-Residential</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
Total Casualties - 5pm	0	0	0	0	0
Ventura					
Casualties - 2am					
<i>Educational</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Single Family</i>	3	0	0	0	3
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Other-Residential</i>	2	0	0	0	2

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
California					
Ventura					
Total Casualties - 2am	5	0	0	0	5
Casualties - 2pm					
<i>Industrial</i>	1	0	0	0	1
<i>Educational</i>	1	0	0	0	1
<i>Commuting</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Other-Residential</i>	1	0	0	0	1
<i>Commercial</i>	3	0	0	0	3
<i>Single Family</i>	1	0	0	0	1
Total Casualties - 2pm	6	0	0	0	7
Casualties - 5pm					
<i>Commuting</i>	0	0	0	0	0
<i>Other-Residential</i>	1	0	0	0	1
<i>Commercial</i>	2	0	0	0	2
<i>Hotels</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Single Family</i>	1	0	0	0	1
<i>Industrial</i>	0	0	0	0	0
Total Casualties - 5pm	5	0	0	0	5
Region Total	NA	NA	NA	NA	NA

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Debris Summary Report

May 22, 2024

All values are in thousands of tons.

	Brick, Wood & Others	Concrete & Steel	Total
California			
Kings	0	0	0
San Luis Obispo	0	0	0
Tulare	0	0	0
Inyo	0	0	0
Riverside	1,197	875	2,072
San Bernardino	484	352	836
Imperial	24	28	51
Ventura	5	3	8
Kern	0	0	1
Orange	1,781	4,900	6,680
San Diego	175	131	307
Los Angeles	6,558	11,432	17,990
Santa Barbara	0	0	0
Total	10,225	17,721	27,945
Region Total	10,225	17,721	27,945

Brick, Wood & Others

Concrete & Steel

Total

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Direct Economic Losses For Buildings

May 22, 2024

All values are in thousands of dollars

	Capital Stock Losses				Loss Ratio %	Income Losses				Total Loss
	Cost Structural Damage	Cost Non-struct. Damage	Cost Contents Damage	Inventory Loss		Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	
California										
Inyo	0	1	0	0	0.00	0	0	0	0	1
Imperial	54,403	263,660	127,718	35,574	0.95	13,933	8,328	8,819	7,028	519,462
San Bernardino	811,674	4,468,107	2,154,595	309,439	1.40	293,362	113,927	155,124	193,480	8,499,709
Riverside	1,835,739	10,313,934	4,193,959	256,633	2.90	881,047	319,374	358,907	413,905	18,573,498
Kings	0	0	0	0	0.00	0	0	0	0	0
San Luis Obispo	0	1	0	0	0.00	0	0	0	0	1
Tulare	0	3	3	1	0.00	0	0	0	0	7
Santa Barbara	46	1,420	855	123	0.00	6	5	5	11	2,473
Kern	458	6,932	3,780	577	0.01	59	42	48	74	11,969

	Capital Stock Losses				Loss Ratio %	Income Losses				Total Loss
	Cost Structural Damage	Cost Non-struct. Damage	Cost Contents Damage	Inventory Loss		Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	
Ventura	9,119	113,736	58,931	7,165	0.08	1,110	1,526	1,738	1,545	194,870
Orange	4,635,160	19,414,715	7,818,509	725,472	4.45	2,300,050	1,358,310	1,635,443	1,142,571	39,030,230
San Diego	318,587	2,640,777	1,305,583	95,204	0.52	108,379	32,930	71,932	68,040	4,641,432
Los Angeles	12,283,436	45,110,625	19,596,048	2,128,964	3.78	5,915,385	3,397,462	4,424,032	3,311,284	96,167,235
Total	19,948,622	82,333,911	35,259,983	3,559,153	1.08	9,513,330	5,231,904	6,656,048	5,137,938	167,640,888
Region Total	19,948,622	82,333,911	35,259,983	3,559,153	1.08	9,513,330	5,231,904	6,656,048	5,137,938	167,640,888

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Direct Economic Loss For Transportation

May 22, 2024

All values are in thousands of dollars

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
California								
Imperial								
Segments	0	0	0					0
Bridges	8,972	5,709	0					14,681
Tunnels	0	0	0					0
Facilities		884	0	0	0	0	5,126	6,010
Total	8,972	6,593	0	0	0	0	5,126	20,692
Inyo								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	62	62
Total	0	0	0	0	0	0	62	62
Kern								
Segments	0	0	0					0
Bridges	72	0	0					72
Tunnels	0	0	0					0
Facilities		180	0	83	0	0	1,416	1,678

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
Total	72	180	0	83	0	0	1,416	1,751
Kings								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		14	0	5	0	0	40	59
Total	0	14	0	5	0	0	40	59
Los Angeles								
Segments	0	0	0					0
Bridges	875,065	78,240	142					953,447
Tunnels	3,063	0	0					3,063
Facilities		28,046	453,244	6,589	100,394	1,541	385,249	975,064
Total	878,128	106,286	453,387	6,589	100,394	1,541	385,249	1,931,574
Orange								
Segments	0	0	0					0
Bridges	447,392	28,707	0					476,099
Tunnels	1,060	0	0					1,060
Facilities		4,832	0	0	8,735	738	67,891	82,196
Total	448,452	33,539	0	0	8,735	738	67,891	559,355
Riverside								
Segments	0	0	0					0
Bridges	275,882	8,042	0					283,924
Tunnels	0	0	0					0
Facilities		2,593	0	3,490	0	0	23,597	29,680

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
Total	275,882	10,634	0	3,490	0	0	23,597	313,604
San Bernardino								
Segments	0	0	0					0
Bridges	59,650	2,418	0					62,068
Tunnels	2	0	0					2
Facilities		5,806	0	655	0	0	45,427	51,889
Total	59,652	8,225	0	655	0	0	45,427	113,959
San Diego								
Segments	0	0	0					0
Bridges	12,512	1,001	0					13,513
Tunnels	21	0	0					21
Facilities		2,013	74,301	89	27,726	301	73,415	177,846
Total	12,533	3,014	74,302	89	27,726	301	73,415	191,379
San Luis Obispo								
Segments	0	0	0					0
Bridges	1	0	0					1
Tunnels	0	0	0					0
Facilities		9	0	5	29	0	50	92
Total	1	9	0	5	29	0	50	93
Santa Barbara								
Segments	0	0	0					0
Bridges	4	0	0					4
Tunnels	0	0	0					0
Facilities		83	0	27	330	38	455	934

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
Total	4	83	0	27	330	38	455	938
Tulare								
Segments	0	0	0					0
Bridges	1	0	0					1
Tunnels	0	0	0					0
Facilities		0	0	9	0	0	28	38
Total	1	0	0	9	0	0	28	38
Ventura								
Segments	0	0	0					0
Bridges	327	5	0					331
Tunnels	0	0	0					0
Facilities		463	0	89	2,732	67	2,242	5,593
Total	327	467	0	89	2,732	67	2,242	5,924
Total	1,684,024	169,043	527,688	11,040	139,946	2,686	605,001	3,139,429
Region Total	1,684,024	169,043	527,688	11,040	139,946	2,686	605,001	3,139,429

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Direct Economic Loss For Utilities

May 22, 2024

All values are in thousands of dollars

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
California							
Imperial							
<i>Facilities</i>	2,018	126,036	0	0	1,955,107	155	2,083,316
<i>Pipelines</i>	2,882	1,448	0	0			4,329
Total	4,900	127,484	0	0	1,955,107	155	2,087,645
Inyo							
<i>Facilities</i>	0	0	0	0	316	0	316
<i>Pipelines</i>	65	33	0	0			98
Total	65	33	0	0	316	0	414
Kern							
<i>Facilities</i>	112	369	1	291	331,398	19	332,190
<i>Pipelines</i>	723	363	0	0			1,086
Total	835	732	1	291	331,398	19	333,275
Kings							
<i>Facilities</i>	0	0	0	4	209	0	213

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
<i>Pipelines</i>	77	39	0	0			116
Total	77	39	0	4	209	0	330
Los Angeles							
<i>Facilities</i>	56,991	330,572	569	14,532	5,587,255	1,971	5,991,890
<i>Pipelines</i>	52,971	26,609	0	0			79,580
Total	109,962	357,181	569	14,532	5,587,255	1,971	6,071,470
Orange							
<i>Facilities</i>	22,095	128,845	34	7,350	714,093	420	872,838
<i>Pipelines</i>	29,401	14,769	0	0			44,170
Total	51,496	143,614	34	7,350	714,093	420	917,008
Riverside							
<i>Facilities</i>	60,423	522,924	0	3,745	1,123,589	621	1,711,301
<i>Pipelines</i>	30,064	15,102	0	0			45,165
Total	90,486	538,025	0	3,745	1,123,589	621	1,756,466
San Bernardino							
<i>Facilities</i>	8,649	252,171	0	910	2,186,879	393	2,449,002
<i>Pipelines</i>	8,085	4,061	0	0			12,146
Total	16,734	256,232	0	910	2,186,879	393	2,461,148
San Diego							
<i>Facilities</i>	2,907	158,287	3	10,155	1,171,092	424	1,342,867
<i>Pipelines</i>	10,049	5,048	0	0			15,096

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
Total	12,955	163,334	3	10,155	1,171,092	424	1,357,963
San Luis Obispo							
<i>Facilities</i>	0	21	0	0	4,745	0	4,766
<i>Pipelines</i>	116	58	0	0			174
Total	116	79	0	0	4,745	0	4,940
Santa Barbara							
<i>Facilities</i>	0	740	0	151	1,016	4	1,912
<i>Pipelines</i>	95	48	0	0			142
Total	95	788	0	151	1,016	4	2,054
Tulare							
<i>Facilities</i>	0	5	0	0	303	0	309
<i>Pipelines</i>	113	57	0	0			169
Total	113	62	0	0	303	0	478
Ventura							
<i>Facilities</i>	1,421	18,538	0	165	149,437	40	169,602
<i>Pipelines</i>	475	239	0	0			714
Total	1,897	18,777	0	165	149,437	40	170,316
Total	289,731	1,606,380	607	37,304	13,225,439	4,046	15,163,507
Region Total	289,731	1,606,380	607	37,304	13,225,439	4,046	15,163,507

Potable Water

Waste Water

Oil Systems

Natural Gas

Electric Power

Communication

Total

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Hazus Quick Assessment Report

Estimated Economic Loss (\$ Billions)

Category	Description	Range
General Building Stock	Building Damage	51.10 - 204.60
	Building Contents	7.30 - 30.00
	Business Interruption	13.30 - 53.10
Infrastructure	Lifelines Damage	
Total		83.80 - 335.30

Preliminary Damage Assessment (PDA) Estimates

Description	Residential	Commercial	Other	Total
Affected		96,000	34,200	
Minor	300,900	52,700	20,000	373,600
Major	39,400	18,700	8,700	66,800
Destroyed	12,000	6,300	2,900	21,200
Total		173,700	65,800	

Estimated Casualties : Night Time

Severity Level	Description	# Persons
Level 1	Medical Aid	7,000 - 30,000
Level 2	Hospital Care	1,200 - 5,000
Level 3	Life-threatening	130 - 500
Level 4	Fatalities	200 - 1,000

Estimated Shelter Needs

Type	Households	People
Displaced Households	40,000 - 161,000	100,000 - 402,500
Public Shelter	19,920	49,800

Comments :

*Hazus damage estimates are presented using FEMA Preliminary Damage Assessment (PDA) categories. These estimates should be used for planning purposes and may not reflect actual observed damages from the PDA process.

Disclaimer:

The estimates of social and economic impacts contained in this report were produced using HAZUS loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific earthquake. These results can be improved by using enhanced inventory, geotechnical, and observed ground motion data.

Earthquake Information

Location :

Origin Time:

Magnitude : 7.77

Epicenter Latitude/Longitude :
/

Depth & Type : /U

Name :
NA

Ground Motion /Attenuation :

Maximum PGA: 1.00

Information Sources:

Comments :

Population and Building Exposure

Population: 24,407,523

Building Exposure : (\$ Millions)

Residential	
Commercial	825,275
Other	615,836
Total	

Counties : See Appendix

Major Metro Area :

Hazus Quick Assessment Report

Estimated Economic Loss (\$ Billions)

Category	Description	Range
General Building Stock	Building Damage	51.10 - 204.60
	Building Contents	7.30 - 30.00
	Business Interruption	13.30 - 53.10
Infrastructure	Lifelines Damage	
Total		83.80 - 335.30

Preliminary Damage Assessment (PDA) Estimates

Description	Residential	Commercial	Other	Total
Affected		96,000	34,200	
Minor	300,900	52,700	20,000	373,600
Major	39,400	18,700	8,700	66,800
Destroyed	12,000	6,300	2,900	21,200
Total		173,700	65,800	

Estimated Casualties : Day Time

Severity Level	Description	# Persons
Level 1	Medical Aid	15,000 - 62,000
Level 2	Hospital Care	3,000 - 14,000
Level 3	Life-threatening	500 - 1,900
Level 4	Fatalities	900 - 4,000

Estimated Shelter Needs

Type	Households	People
Displaced Households	40,000 - 161,000	100,000 - 402,500
Public Shelter	19,920	49,800

Comments :

*Hazus damage estimates are presented using FEMA Preliminary Damage Assessment (PDA) categories. These estimates should be used for planning purposes and may not reflect actual observed damages from the PDA process.

Disclaimer:

The estimates of social and economic impacts contained in this report were produced using HAZUS loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific earthquake. These results can be improved by using enhanced inventory, geotechnical, and observed ground motion data.

Earthquake Information

Location :

Origin Time:

Magnitude : 7.77

Epicenter Latitude/Longitude :
/

Depth & Type : /U

Name :
NA

Ground Motion /Attenuation :

Maximum PGA: 1.00

Information Sources:

Comments :

Population and Building Exposure

Population: 24,407,523

Building Exposure : (\$ Millions)

Residential	
Commercial	825,275
Other	615,836
Total	

Counties : See Appendix

Major Metro Area :

Hazus Quick Assessment Report

Estimated Economic Loss (\$ Billions)

Category	Description	Range
General Building Stock	Building Damage	51.10 - 204.60
	Building Contents	7.30 - 30.00
	Business Interruption	13.30 - 53.10
Infrastructure	Lifelines Damage	
Total		83.80 - 335.30

Preliminary Damage Assessment (PDA) Estimates

Description	Residential	Commercial	Other	Total
Affected		96,000	34,200	
Minor	300,900	52,700	20,000	373,600
Major	39,400	18,700	8,700	66,800
Destroyed	12,000	6,300	2,900	21,200
Total		173,700	65,800	

Estimated Casualties : Commute Time

Severity Level	Description	# Persons
Level 1	Medical Aid	11,000 - 43,000
Level 2	Hospital Care	3,000 - 10,000
Level 3	Life-threatening	700 - 3,000
Level 4	Fatalities	700 - 3,000

Estimated Shelter Needs

Type	Households	People
Displaced Households	40,000 - 161,000	100,000 - 402,500
Public Shelter	19,920	49,800

Comments :

*Hazus damage estimates are presented using FEMA Preliminary Damage Assessment (PDA) categories. These estimates should be used for planning purposes and may not reflect actual observed damages from the PDA process.

Disclaimer:

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Earthquake Information

Location :

Origin Time:

Magnitude : 7.77

Epicenter Latitude/Longitude :
/

Depth & Type : /U

Name :
NA

Ground Motion /Attenuation :

Maximum PGA: 1.00

Information Sources:

Comments :

Population and Building Exposure

Population: 24,407,523

Building Exposure : (\$ Millions)

Residential	
Commercial	825,275
Other	615,836
Total	

Counties : See Appendix

Major Metro Area :

Shelter Summary Report

May 22, 2024

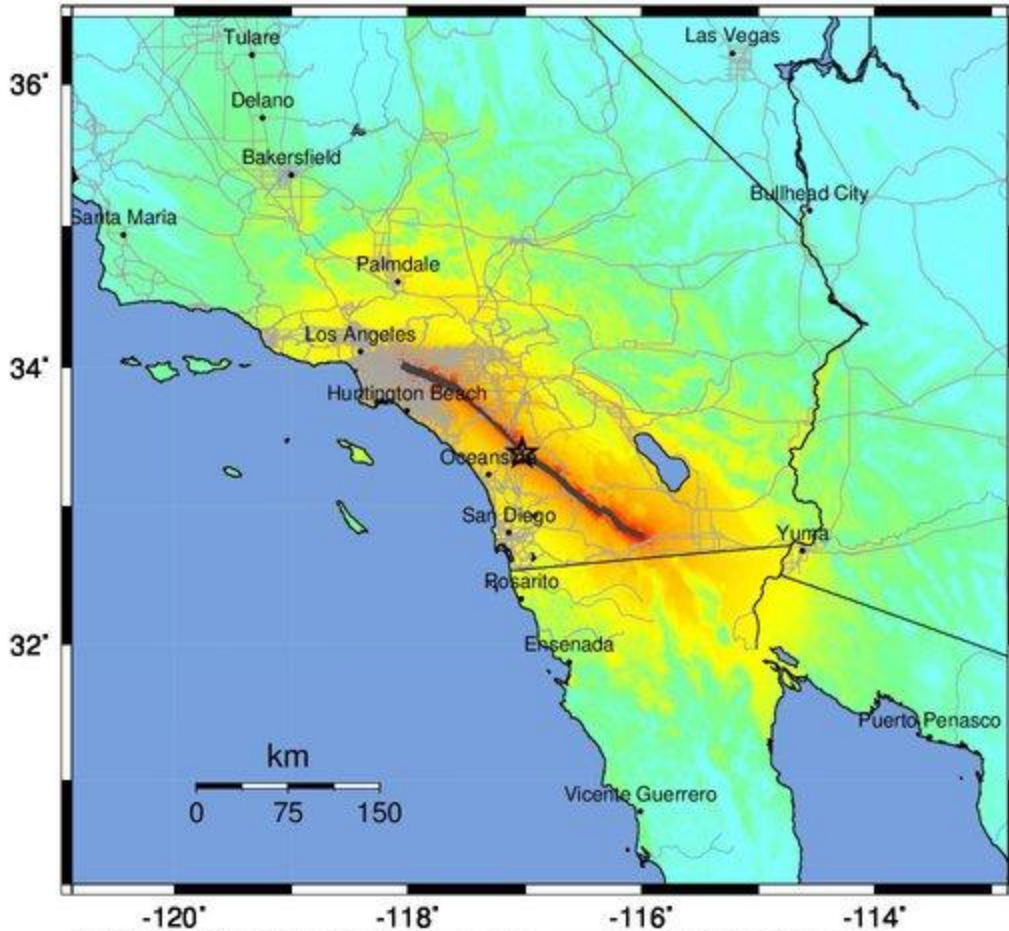
	# of Displaced Households	# of People Needing Short Term Shelter
California		
Kings	0	0
San Luis Obispo	0	0
Tulare	0	0
Inyo	0	0
Riverside	2,397	1,722
San Bernardino	2,349	1,472
Imperial	5	4
Ventura	1	1
Kern	0	0
Orange	18,513	10,849
San Diego	334	178
Los Angeles	56,981	35,575
Santa Barbara	0	0
Total	80,580	49,800
Region Total	80,580	49,800

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

-- Earthquake Planning Scenario --

ShakeMap for Elsinore: CM+J+T+s+GI+W - Median ground motions Scenario

Scenario Date: Jun 30, 2017 10:03:28 AM MDT M 7.8 N33.38 W117.02 Depth: 9.1km



PLANNING SCENARIO ONLY -- Map Version 17 Processed 2017-07-03 08:30:33 AM MDT

PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Mod./Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	<0.05	0.3	2.8	6.2	12	22	40	75	>139
PEAK VEL.(cm/s)	<0.02	0.1	1.4	4.7	9.6	20	41	86	>178
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

Scale based upon Worden et al. (2012)