Hazus: Earthquake Global Risk Report

Region Name: Independencerev

Earthquake Scenario: independencerev2011e_m7p31_se

Print Date: June 05, 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.

Table of Contents

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 11 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 61,718.57 square miles and contains 1,192 census tracts. There are over 1,627 thousand households in the region which has a total population of 5,267,565 peopleF. The distribution of population by Total Region and County is provided in Appendix B.

There are an estimated 1,657 thousand buildings in the region with a total building replacement value (excluding contents) of 885,870 (millions of dollars). Approximately 90.00 % of the buildings (and 60.00% of the building value) are associated with residential housing.

The replacement value of the transportation and utility lifeline systems is estimated to be 95,661 and 119,391 (millions of dollars) , respectively.

Building and Lifeline Inventory

Building Inventory

Hazus estimates that there are 1,657 thousand buildings in the region which have an aggregate total replacement value of 885,870 (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 94 hospitals in the region with a total bed capacity of 14,874 beds. There are 1,986 schools, 529 fire stations, 167 police stations and 25 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 215,052.00 (millions of dollars). This inventory includes over 6,663.58 miles of highways, 4,874 bridges, 163,228.57 miles of pipes.

Table 1: Transportation System Lifeline Inventory

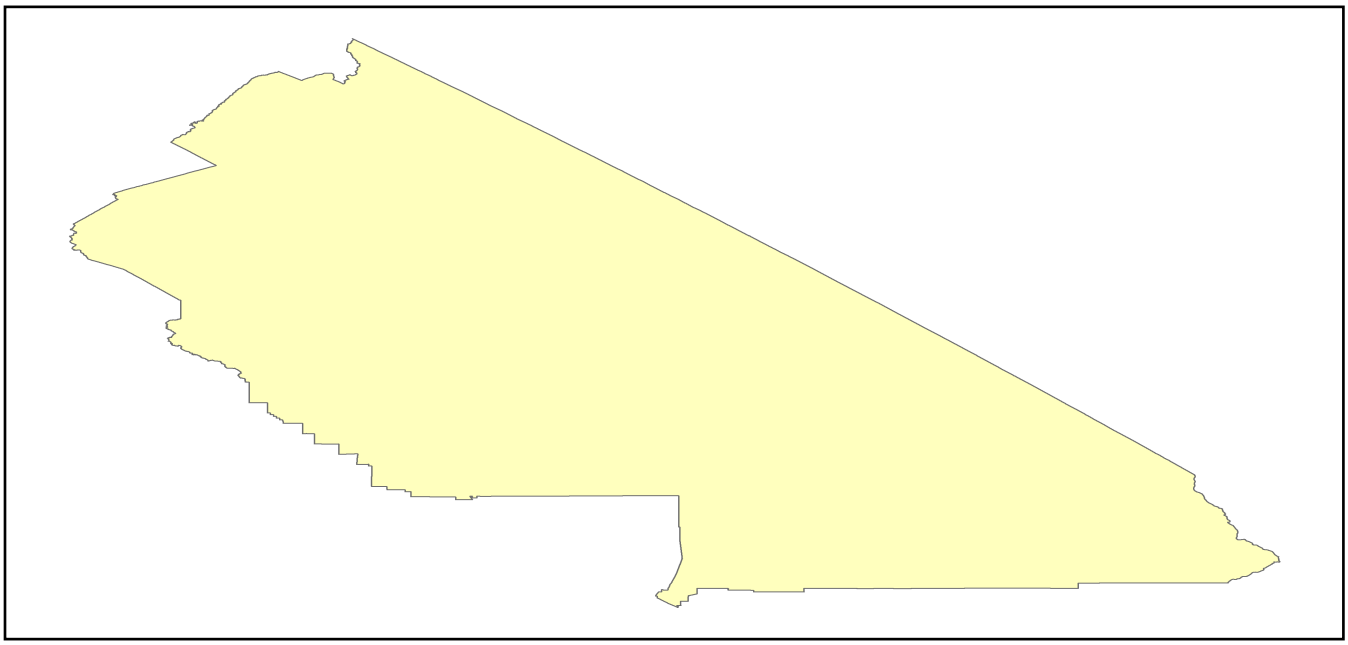
System	Component	# Locations/ # Segments	Replacement value (millions of dollars)
Highway	Bridges	4,874	14855.6442
	Segments	2,643	55070.0788
	Tunnels	10	128.3274
		Subtotal	**70054.0504**
Railways	Bridges	1,115	6344.3500
	Facilities	44	117.1720
	Segments	1,139	17317.5070
	Tunnels	0	0.0000
		Subtotal	**23779.0290**
Light Rail	Bridges	0	0.0000
	Facilities	0	0.0000
	Segments	0	0.0000
	Tunnels	0	0.0000
		Subtotal	**0.0000**
Bus	Facilities	22	47.5821
		Subtotal	**47.5821**
Ferry	Facilities	0	0.0000
		Subtotal	**0.0000**
Port	Facilities	0	0.0000
		Subtotal	**0.0000**
Airport	Facilities	80	774.8811
	Runways	105	1005.5125
		Subtotal	**1780.3936**
		Total	**95,661.10**

Table 2: Utility System Lifeline Inventory

System	Component	# Locations / Segments	Replacement value (millions of dollars)
Potable Water	Distribution Lines	NA	3234.2906
	Facilities	12	471.5280
	Pipelines	0	0.0000
		Subtotal	**3705.8186**
Waste Water	Distribution Lines	NA	1940.5744
	Facilities	35	6018.3130
	Pipelines	0	0.0000
		Subtotal	**7958.8874**
Natural Gas	Distribution Lines	NA	1293.7163
	Facilities	21	848.4600
	Pipelines	268	13905.0474
		Subtotal	**16047.2237**
Oil Systems	Facilities	15	1.7700
	Pipelines	0	0.0000
		Subtotal	**1.7700**
Electrical Power	Facilities	392	91649.5791
		Subtotal	**91649.5791**
Communication	Facilities	241	28.4380
		Subtotal	**28.4380**
		Total	**119,391.70**

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	independencerev2011e_m7p31_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	7.31
Depth (km)	NA
Rupture Length (Km)	NA
Rupture Orientation (degrees)	NA
Attenuation Function	NA

Direct Earthquake Damage

Building Damage

Hazus estimates that about 240 buildings will be at least moderately damaged. This is over 0.00 % of the buildings in the region. There are an estimated 0 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

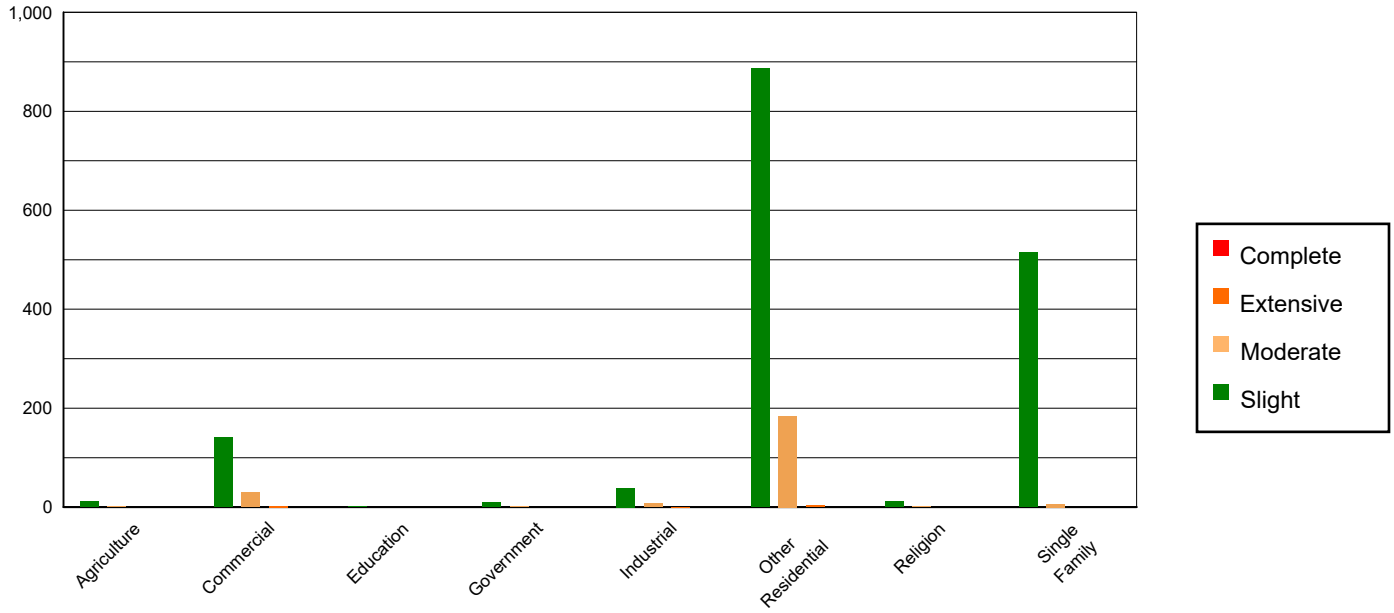


Table 3: Expected Building Damage by Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	22305.06	1.35	11.25	0.70	0.69	0.29	0.00	0.02	0.00	0.00
Commercial	98979.50	5.98	140.67	8.72	29.46	12.64	2.35	32.76	0.03	46.91
Education	2842.85	0.17	1.95	0.12	0.19	0.08	0.00	0.02	0.00	0.00
Government	3071.36	0.19	8.79	0.55	1.76	0.76	0.08	1.15	0.00	0.54
Industrial	26291.74	1.59	38.65	2.40	8.02	3.44	0.59	8.16	0.01	13.90
Other Residential	246103.59	14.86	886.00	54.91	184.33	79.11	4.06	56.59	0.02	36.65
Religion	7083.69	0.43	12.15	0.75	2.07	0.89	0.09	1.31	0.00	2.00
Single Family	1249078.48	75.44	514.05	31.86	6.47	2.78	0.00	0.00	0.00	0.00
Total	**1,655,756**		**1,614**		**233**		**7**		**0**	

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

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Wood	1445264.56	87.29	698.66	43.30	10.78	4.63	0.01	0.10	0.00	0.00
Steel	33128.29	2.00	80.04	4.96	23.56	10.11	2.08	28.95	0.03	48.10
Concrete	27435.33	1.66	56.59	3.51	16.16	6.94	1.60	22.28	0.01	17.20
Precast	17536.85	1.06	34.48	2.14	6.26	2.69	0.32	4.39	0.00	3.99
RM	55845.48	3.37	27.00	1.67	3.30	1.41	0.02	0.23	0.00	0.00
URM	4683.80	0.28	51.40	3.19	11.52	4.95	0.83	11.58	0.02	30.71
MH	71861.95	4.34	665.33	41.23	161.42	69.28	2.33	32.47	0.00	0.00
Total	**1,655,756**		**1,614**		**233**		**7**		**0**	

*Note:

RM Reinforced Masonry
URM Unreinforced Masonry
MH Manufactured Housing

Essential Facility Damage

Before the earthquake, the region had 14,874 hospital beds available for use. On the day of the earthquake, the model estimates that only 14,688 hospital beds (99.00%) are available for use by patients already in the hospital and those injured by the earthquake. After one week, 99.00% of the beds will be back in service. By 30 days, 100.00% 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	94	1	0	93
Schools	1,986	9	0	1,977
EOCs	25	1	0	24
PoliceStations	167	1	0	166
FireStations	529	2	0	524

Transportation Lifeline Damage

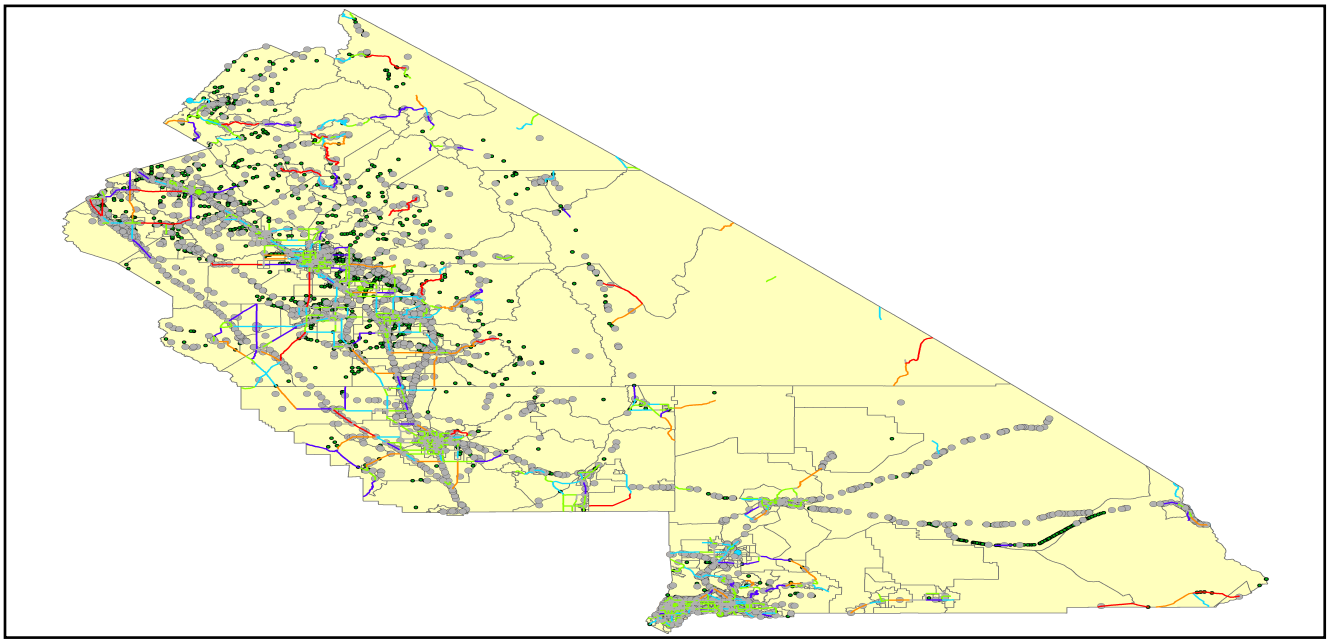


Table 6: Expected Damage to the Transportation Systems

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	2,643	0	0	2,643	2,643
	Bridges	4,874	3	0	4,872	4,872
	Tunnels	10	0	0	10	10
Railways	Segments	1,139	0	0	1,139	1,139
	Bridges	1,115	0	0	1,115	1,115
	Tunnels	0	0	0	0	0
	Facilities	44	0	0	44	44
Light Rail	Segments	0	0	0	0	0
	Bridges	0	0	0	0	0
	Tunnels	0	0	0	0	0
	Facilities	0	0	0	0	0
Bus	Facilities	22	0	0	22	22
Ferry	Facilities	0	0	0	0	0
Port	Facilities	0	0	0	0	0
Airport	Facilities	80	2	0	80	80
	Runways	105	0	0	105	105

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	12	0	0	12	12
Waste Water	35	0	0	35	35
Natural Gas	21	0	0	21	21
Oil Systems	15	0	0	15	15
Electrical Power	392	1	0	391	391
Communication	241	2	0	241	241

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

System	Total Pipelines Length (miles)	Number of Leaks	Number of Breaks
Potable Water	100,485	487	122
Waste Water	60,291	245	61
Natural Gas	2,453	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	1,627,391	0	0	0	0	0
Electric Power		0	0	0	0	0

Induced Earthquake Damage

Fire Following Earthquake

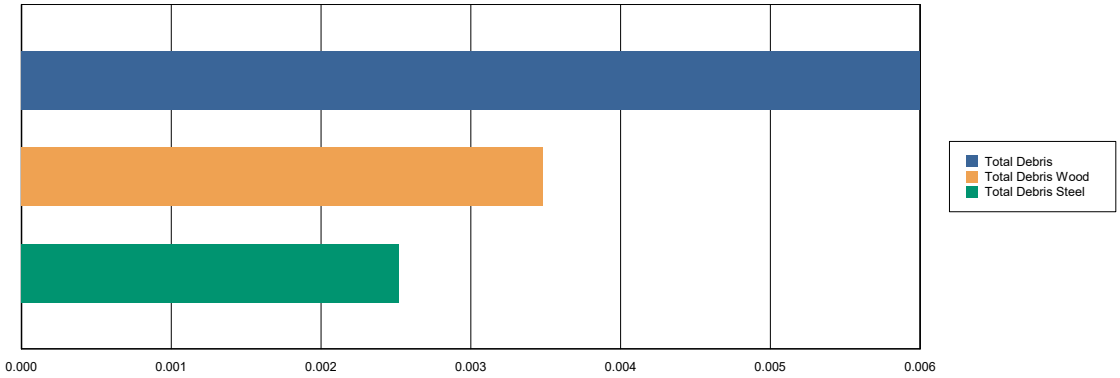
Fires often occur after an earthquake. Because of the number of fires and the lack of water to fight the fires, they can often burn out of control. Hazus uses a Monte Carlo simulation model to estimate the number of ignitions and the amount of burnt area. For this scenario, the model estimates that there will be 0 ignitions that will burn about 0.00 sq. mi 0.00 % of the region's total area.) The model also estimates that the fires will displace about 0 people and burn about 0 (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 6,000 tons of debris will be generated. Of the total amount, Brick/Wood comprises 58.00% 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 240 truckloads (@25 tons/truck) to remove the debris generated by the earthquake.

Earthquake Debris (millions of tons)



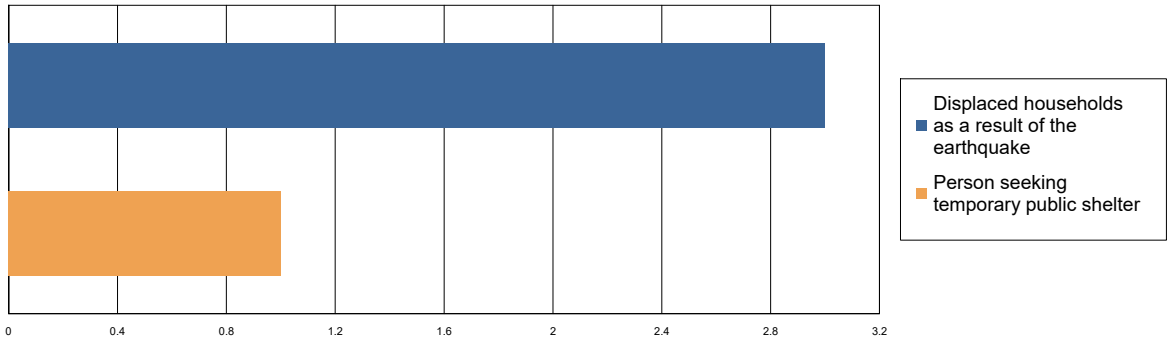
Brick/ Wood	Reinforced Concrete/Steel	Total Debris	Truck Load
0.00	0.00	0.01	240 (@25 tons/truck)

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 3 households to be displaced due to the earthquake. Of these, 1 people (out of a total population of 5,267,565) will seek temporary shelter in public shelters.

Displaced Households/ Persons Seeking Short Term Public Shelter



Displaced households as a result of the earthquake	Persons seeking temporary public shelter
3	1

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	0.03	0.00	0.00	0.00
	Commuting	0.00	0.01	0.01	0.00
	Educational	0.00	0.00	0.00	0.00
	Hotels	0.00	0.00	0.00	0.00
	Industrial	0.03	0.00	0.00	0.00
	Other-Residential	2.25	0.14	0.00	0.00
	Single Family	0.60	0.00	0.00	0.00
	Total	**3**	**0**	**0**	**0**
2 PM	Commercial	2.22	0.15	0.00	0.00
	Commuting	0.03	0.05	0.07	0.01
	Educational	0.38	0.02	0.00	0.00
	Hotels	0.00	0.00	0.00	0.00
	Industrial	0.22	0.01	0.00	0.00
	Other-Residential	0.68	0.04	0.00	0.00
	Single Family	0.18	0.00	0.00	0.00
	Total	**4**	**0**	**0**	**0**
5 PM	Commercial	1.43	0.09	0.00	0.00
	Commuting	0.58	0.96	1.40	0.28
	Educational	0.01	0.00	0.00	0.00
	Hotels	0.00	0.00	0.00	0.00
	Industrial	0.14	0.01	0.00	0.00
	Other-Residential	0.81	0.05	0.00	0.00
	Single Family	0.21	0.00	0.00	0.00
	Total	**3**	**1**	**1**	**0**

Economic Loss

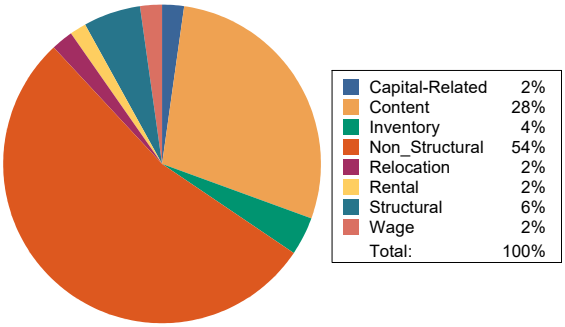
The total economic loss estimated for the earthquake is 693.79 (millions of dollars), which includes building and lifeline related losses based on the region's available inventory. The following three sections provide more detailed information about these losses.

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 83.61 (millions of dollars); 8 % 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 38 % 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)

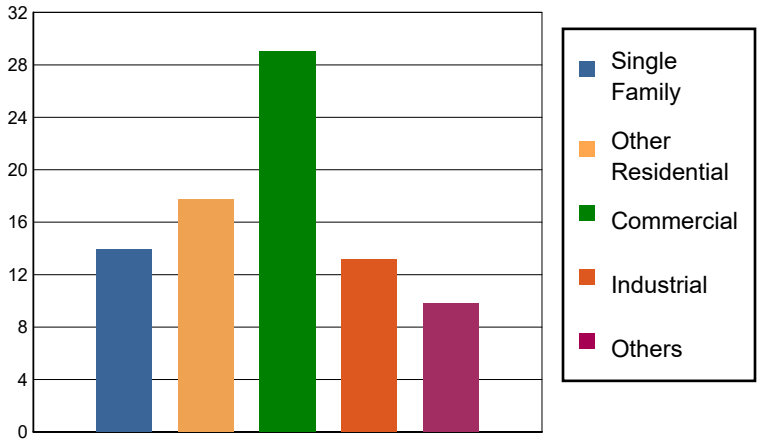


Table 11: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
Income Losses							
	Wage	0.0000	0.1560	1.4979	0.0721	0.2396	1.9656
	Capital-Related	0.0000	0.0662	1.6852	0.0472	0.0193	1.8179
	Rental	0.0436	0.5552	0.7828	0.0389	0.0447	1.4652
	Relocation	0.0424	0.4834	0.7864	0.1324	0.2058	1.6504
	Subtotal	**0.0860**	**1.2608**	**4.7523**	**0.2906**	**0.5094**	**6.8991**
Capital Stock Losses							
	Structural	0.8083	1.2960	1.6228	0.6211	0.4503	4.7985
	Non_Structural	8.9956	11.6331	12.6900	6.6601	4.9461	44.9249
	Content	4.0078	3.5257	8.2889	4.7784	3.2200	23.8208
	Inventory	0.0000	0.0000	1.6999	0.7843	0.6786	3.1628
	Subtotal	**13.8117**	**16.4548**	**24.3016**	**12.8439**	**9.2950**	**76.7070**
	Total	**13.90**	**17.72**	**29.05**	**13.13**	**9.80**	**83.61**

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	55070.0788	0.0000	0.00
	Bridges	14855.6442	3.9514	0.03
	Tunnels	128.3274	0.0000	0.00
	Subtotal	**70054.0504**	**3.9514**	
Railways	Segments	17317.5070	0.0000	0.00
	Bridges	6344.3500	0.0000	0.00
	Tunnels	0.0000	0.0000	0.00
	Facilities	117.1720	0.6012	0.51
	Subtotal	**23779.0290**	**0.6012**	
Light Rail	Segments	0.0000	0.0000	0.00
	Bridges	0.0000	0.0000	0.00
	Tunnels	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Subtotal	**0.0000**	**0.0000**	
Bus	Facilities	47.5821	0.3234	0.68
	Subtotal	**47.5821**	**0.3234**	
Ferry	Facilities	0.0000	0.0000	0.00
	Subtotal	**0.0000**	**0.0000**	
Port	Facilities	0.0000	0.0000	0.00
	Subtotal	**0.0000**	**0.0000**	
Airport	Facilities	774.8811	8.6363	1.11
	Runways	1005.5125	0.0000	0.00
	Subtotal	**1780.3936**	**8.6363**	
	Total	**95,661.06**	**13.51**	

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	471.5280	0.0580	0.01
	Distribution Lines	3234.2906	2.1910	0.07
	Subtotal	**3705.8186**	**2.2490**	
Waste Water	Pipelines	0.0000	0.0000	0.00
	Facilities	6018.3130	1.0094	0.02
	Distribution Lines	1940.5744	1.1006	0.06
	Subtotal	**7958.8874**	**2.1100**	
Natural Gas	Pipelines	13905.0474	0.0000	0.00
	Facilities	848.4600	0.0321	0.00
	Distribution Lines	1293.7163	0.3771	0.03
	Subtotal	**16047.2237**	**0.4092**	
Oil Systems	Pipelines	0.0000	0.0000	0.00
	Facilities	1.7700	0.0013	0.07
	Subtotal	**1.7700**	**0.0013**	
Electrical Power	Facilities	91649.5791	591.7652	0.65
	Subtotal	**91649.5791**	**591.7652**	
Communication	Facilities	28.4380	0.1351	0.48
	Subtotal	**28.4380**	**0.1351**	
	Total	**119,391.72**	**596.67**	

Appendix A: County Listing for the Region

Fresno,CA

Inyo,CA

Kern,CA

Kings,CA

Madera,CA

Mariposa,CA

Merced,CA

Mono,CA

San Bernardino,CA

Tulare,CA

Tuolumne,CA

Appendix B: Regional Population and Building Value Data

State	County Name	Population	Building Value (millions of dollars)		
			Residential	Non-Residential	Total
California					
	Fresno	1,008,654	98,532	61,772	160,304
	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
	Madera	156,255	18,025	9,641	27,667
	Mariposa	17,131	3,299	1,141	4,441
	Merced	281,202	25,194	26,098	51,292
	Mono	13,195	3,293	1,083	4,377
	San Bernardino	2,181,654	225,045	152,557	377,602
	Tulare	473,117	43,262	31,210	74,472
	Tuolumne	55,620	8,964	3,507	12,471
Total Region		**5,267,565**	**529,851**	**356,008**	**885,864**

Independence rev

Building Inspection Tagging (Counts)

Inspected		Restricted		Unsafe	
Residential	191	Residential	4.06	Residential	0.0203
Commercial	29.5	Commercial	2.35	Commercial	0.0259
Industrial	8.02	Industrial	0.585	Industrial	0.00769
Agricultural	0.687	Agricultural	0.0012	Agricultural	0
Educational	0.194	Educational	0.00119	Educational	0
Government	1.76	Government	0.0828	Government	0.0003
Religious	2.07	Religious	0.0939	Religious	0.0011

Total Economic Loss

Total: $83.6M

Top Counties	State	Total
Inyo	CA	$48.4M
Tulare	CA	$14.6M
Fresno	CA	$14.3M
Kern	CA	$4.2M
Kings	CA	$1.03M
Madera	CA	$761K
Mono	CA	$296K

Injuries & Fatalities

Total Day: 4.08
Total Night: 3.08

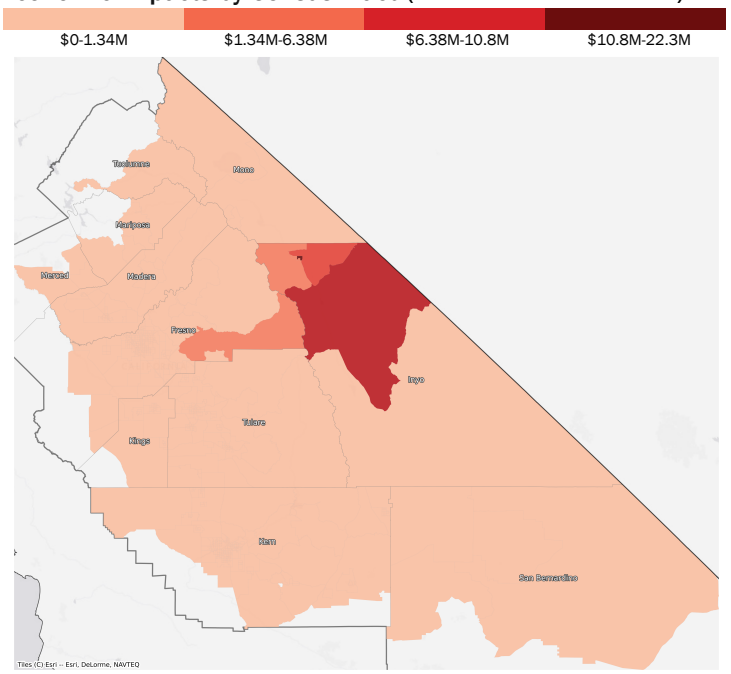
Top Counties	State	Injuries (day/night)	Fatalities (day/night)
Inyo	CA	3.25/2.5	0.0192/0.00297
Tulare	CA	0.39/0.276	0.000078/0.000019
Fresno	CA	0.314/0.226	0.000077/0.000018
Kern	CA	0.0881/0.0611	0.000029/0.000009
Kings	CA	0.0129/0.00412	0.000005/0.000001
Madera	CA	0.00594/0.00455	0.000002/0.000002
Mono	CA	0.00372/0.0062	0/0

Displaced Households & Short-Term Shelter Needs

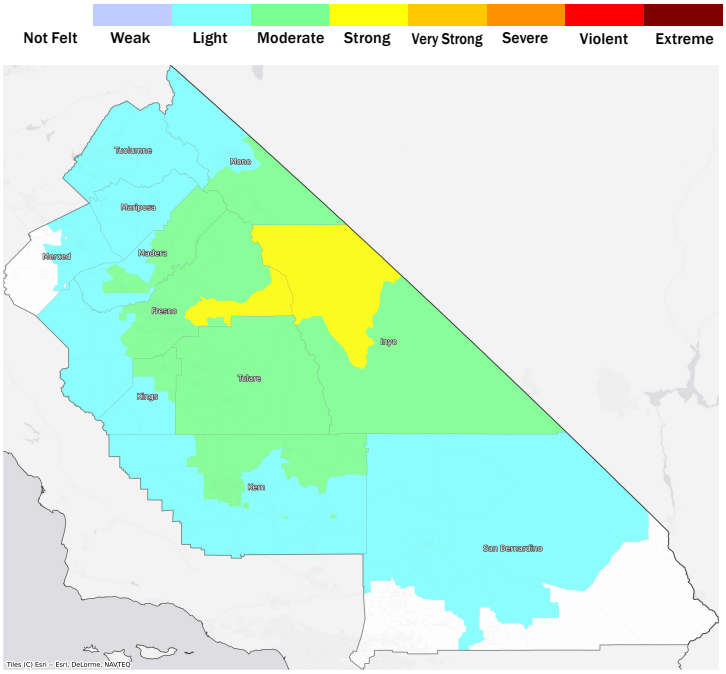
Total Displaced: 3.74
Total Needing Shelter: 1.73

Top Counties	State	Displaced	Needing Shelter
Inyo	CA	3.74	1.72
Fresno	CA	0.00739	0.00452
Tulare	CA	0.000485	0.000381
Kern	CA	0	0
Kings	CA	0	0
Madera	CA	0	0
Mariposa	CA	0	0

Economic Impacts by Census Tract (621 Tracts with Losses)



Ground Shaking



Debris

Total Tons: 6.53K
Total Truckloads: 261

Type	Tons
Brick, Wood, and Other	3.78K
Concrete & Steel	2.75K

Independence rev

Debris Generated by Census Tract

California Department of Conservation
California Geological Survey

Study Region: Independence rev
Scenario: independencerev2011e_m7p31_se

Debris Generated *(in tons)*

- 0 - 1
- >1 - 50
- >50 - 200
- >200 - 1,000
- >1,000 - 2,700

Independence rev

Displaced Households by Census Tract

California Department of Conservation
California Geological Survey

Study Region: Independence rev
Scenario: independencerev2011e_m7p31_se

Displaced Households

- 0
- 1 - 3

Independence rev

Loss Ratio by Census Tract

California Department of Conservation
California Geological Survey

Study Region: Independence rev
Scenario: independencerev2011e_m7p31_se

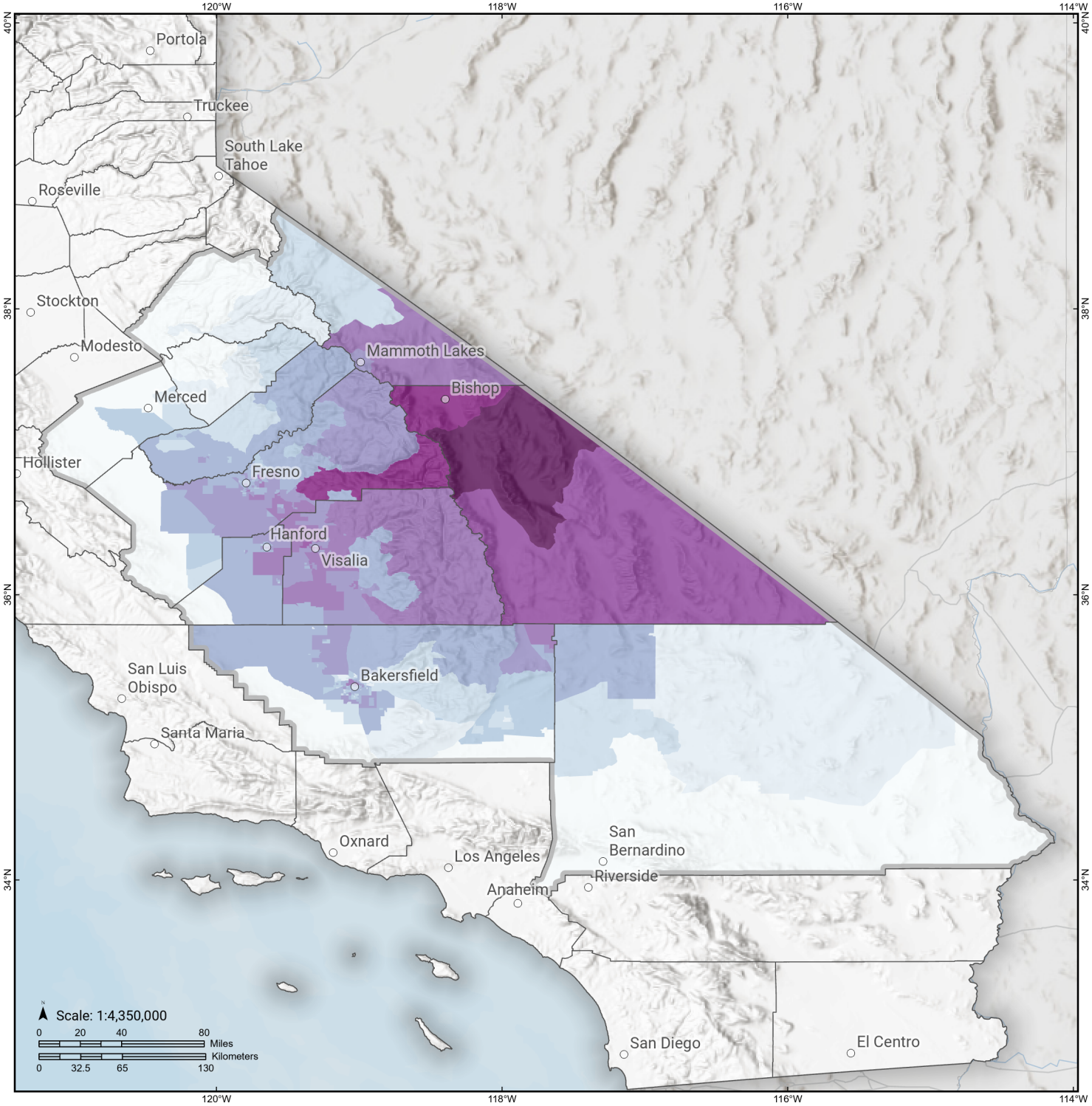
Loss Ratio *(ratio of building related economic loss to exposed value of buildings)*

- 0%
- >0 - 2%

Independence rev

Total Building Related Economic Loss by Census Tract

California Department of Conservation
California Geological Survey



Study Region: Independence rev
Scenario: independencerev2011e_m7p31_se

Economic Loss *(in thousands of USD $)*

0	>50 - 150
>0 - 1	>150 - 500
>1 - 5	>500 - 2,000
>5 - 10	>2,000 - 6,500
>10 - 50	>6,500 - 22,280

Building Damage by Count by General Occupancy

RiskMAP
Increasing Resilience Together

June 05, 2024

	# of Buildings					
	None	Slight	Moderate	Extensive	Complete	Total
California						
Fresno						
Agriculture	3,418	3	0	0	0	3,421
Commercial	21,035	18	1	0	0	21,054
Education	602	0	0	0	0	602
Government	291	0	0	0	0	291
Industrial	5,343	5	0	0	0	5,348
Religion	1,504	3	0	0	0	1,507
Other Residential	40,875	91	7	0	0	40,973
Single Family	226,389	36	0	0	0	226,425
Inyo						
Agriculture	30	2	0	0	0	32
Commercial	597	94	27	2	0	721
Education	39	2	0	0	0	41
Government	91	8	2	0	0	101
Industrial	223	26	7	1	0	257
Religion	48	7	2	0	0	57
Other Residential	3,200	674	172	4	0	4,050
Single Family	4,034	406	6	0	0	4,446
Kern						

		# of Buildings					
		None	Slight	Moderate	Extensive	Complete	Total
	Agriculture	*4,644*	*1*	*0*	*0*	*0*	*4,645*
	Commercial	*15,562*	*5*	*0*	*0*	*0*	*15,567*
	Education	*462*	*0*	*0*	*0*	*0*	*462*
	Government	*443*	*0*	*0*	*0*	*0*	*443*
	Industrial	*6,046*	*1*	*0*	*0*	*0*	*6,047*
	Religion	*1,523*	*1*	*0*	*0*	*0*	*1,524*
	Other Residential	*54,488*	*31*	*1*	*0*	*0*	*54,520*
	Single Family	*205,134*	*5*	*0*	*0*	*0*	*205,139*
Kings							
	Agriculture	*306*	*0*	*0*	*0*	*0*	*306*
	Commercial	*2,317*	*1*	*0*	*0*	*0*	*2,318*
	Education	*103*	*0*	*0*	*0*	*0*	*103*
	Government	*72*	*0*	*0*	*0*	*0*	*72*
	Industrial	*555*	*0*	*0*	*0*	*0*	*555*
	Religion	*210*	*0*	*0*	*0*	*0*	*210*
	Other Residential	*4,340*	*2*	*0*	*0*	*0*	*4,342*
	Single Family	*36,245*	*0*	*0*	*0*	*0*	*36,245*
Madera							
	Agriculture	*634*	*0*	*0*	*0*	*0*	*634*
	Commercial	*2,905*	*0*	*0*	*0*	*0*	*2,905*
	Education	*115*	*0*	*0*	*0*	*0*	*115*
	Government	*111*	*0*	*0*	*0*	*0*	*111*
	Industrial	*903*	*0*	*0*	*0*	*0*	*903*
	Religion	*119*	*0*	*0*	*0*	*0*	*119*
	Other Residential	*6,634*	*1*	*0*	*0*	*0*	*6,635*

	# of Buildings					
	None	Slight	Moderate	Extensive	Complete	Total
Single Family	*38,912*	*0*	*0*	*0*	*0*	*38,912*
Mariposa						
Agriculture	*29*	*0*	*0*	*0*	*0*	*29*
Commercial	*689*	*0*	*0*	*0*	*0*	*689*
Education	*27*	*0*	*0*	*0*	*0*	*27*
Government	*33*	*0*	*0*	*0*	*0*	*33*
Industrial	*94*	*0*	*0*	*0*	*0*	*94*
Religion	*36*	*0*	*0*	*0*	*0*	*36*
Other Residential	*307*	*0*	*0*	*0*	*0*	*307*
Single Family	*8,084*	*0*	*0*	*0*	*0*	*8,084*
Merced						
Agriculture	*7,653*	*0*	*0*	*0*	*0*	*7,653*
Commercial	*4,754*	*0*	*0*	*0*	*0*	*4,754*
Education	*163*	*0*	*0*	*0*	*0*	*163*
Government	*171*	*0*	*0*	*0*	*0*	*171*
Industrial	*1,022*	*0*	*0*	*0*	*0*	*1,022*
Religion	*345*	*0*	*0*	*0*	*0*	*345*
Other Residential	*10,787*	*0*	*0*	*0*	*0*	*10,787*
Single Family	*63,598*	*0*	*0*	*0*	*0*	*63,598*
Mono						
Agriculture	*145*	*0*	*0*	*0*	*0*	*145*
Commercial	*654*	*0*	*0*	*0*	*0*	*654*
Education	*21*	*0*	*0*	*0*	*0*	*21*
Government	*18*	*0*	*0*	*0*	*0*	*18*
Industrial	*108*	*0*	*0*	*0*	*0*	*108*

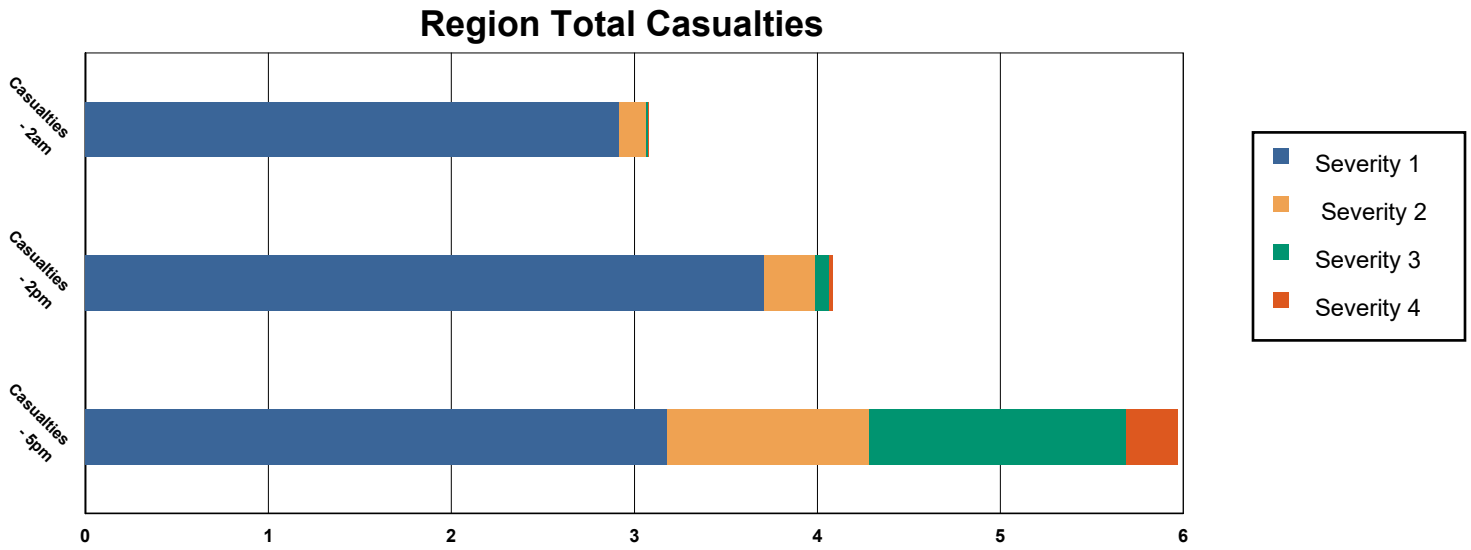
	# of Buildings					
	None	Slight	Moderate	Extensive	Complete	Total
Religion	*32*	*0*	*0*	*0*	*0*	*32*
Other Residential	*1,752*	*6*	*0*	*0*	*0*	*1,759*
Single Family	*7,703*	*1*	*0*	*0*	*0*	*7,704*
San Bernardino						
Agriculture	*1,815*	*0*	*0*	*0*	*0*	*1,815*
Commercial	*40,041*	*0*	*0*	*0*	*0*	*40,041*
Education	*985*	*0*	*0*	*0*	*0*	*985*
Government	*1,238*	*0*	*0*	*0*	*0*	*1,238*
Industrial	*9,474*	*0*	*0*	*0*	*0*	*9,474*
Religion	*2,320*	*0*	*0*	*0*	*0*	*2,320*
Other Residential	*98,821*	*0*	*0*	*0*	*0*	*98,821*
Single Family	*525,367*	*0*	*0*	*0*	*0*	*525,367*
Tulare						
Agriculture	*3,549*	*6*	*0*	*0*	*0*	*3,555*
Commercial	*8,851*	*21*	*1*	*0*	*0*	*8,873*
Education	*269*	*0*	*0*	*0*	*0*	*269*
Government	*460*	*1*	*0*	*0*	*0*	*461*
Industrial	*2,142*	*5*	*0*	*0*	*0*	*2,148*
Religion	*825*	*2*	*0*	*0*	*0*	*827*
Other Residential	*19,938*	*80*	*4*	*0*	*0*	*20,022*
Single Family	*111,968*	*66*	*0*	*0*	*0*	*112,034*
Tuolumne						
Agriculture	*82*	*0*	*0*	*0*	*0*	*82*
Commercial	*1,576*	*0*	*0*	*0*	*0*	*1,576*
Education	*57*	*0*	*0*	*0*	*0*	*57*

	# of Buildings					
	None	Slight	Moderate	Extensive	Complete	Total
Government	*143*	*0*	*0*	*0*	*0*	*143*
Industrial	*383*	*0*	*0*	*0*	*0*	*383*
Religion	*121*	*0*	*0*	*0*	*0*	*121*
Other Residential	*4,962*	*0*	*0*	*0*	*0*	*4,962*
Single Family	*21,645*	*0*	*0*	*0*	*0*	*21,645*
Total	**1,655,756**	**1,614**	**233**	**7**	**0**	**1,657,610**
Region Total	**1,655,756**	**1,614**	**233**	**7**	**0**	**1,657,610**

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

June 05, 2024



	Injury Severity Level				
	Severity 1	Severity 2	Severity 3	Severity 4	Total
California					
Fresno					
Casualties - 2am					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2am	**0**	**0**	**0**	**0**	**0**
Casualties - 2pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0

	Injury Severity Level				
	Severity 1	Severity 2	Severity 3	Severity 4	Total
California					
Fresno					
Total Casualties - 2pm	**0**	**0**	**0**	**0**	**0**
Casualties - 5pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 5pm	**0**	**0**	**0**	**0**	**0**
Inyo					
Casualties - 2am					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	2	0	0	0	2
Single Family	0	0	0	0	0
Total Casualties - 2am	**2**	**0**	**0**	**0**	**3**
Casualties - 2pm					
Commuting	0	0	0	0	0
Commercial	2	0	0	0	2
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	1	0	0	0	1
Single Family	0	0	0	0	0
Total Casualties - 2pm	**3**	**0**	**0**	**0**	**3**
Casualties - 5pm					
Commuting	1	1	1	0	3
Commercial	1	0	0	0	1
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	1	0	0	0	1
Single Family	0	0	0	0	0
Total Casualties - 5pm	**3**	**1**	**1**	**0**	**5**
Kern					
Casualties - 2am					
Commuting	0	0	0	0	0

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

	Injury Severity Level				
	Severity 1	Severity 2	Severity 3	Severity 4	Total
California					
Kings					
Casualties - 2pm					
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2pm	**0**	**0**	**0**	**0**	**0**
Casualties - 5pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 5pm	**0**	**0**	**0**	**0**	**0**
Madera					
Casualties - 2am					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2am	**0**	**0**	**0**	**0**	**0**
Casualties - 2pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2pm	**0**	**0**	**0**	**0**	**0**
Casualties - 5pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 5pm	**0**	**0**	**0**	**0**	**0**

	Injury Severity Level				
	Severity 1	Severity 2	Severity 3	Severity 4	Total
California					
Mariposa					
Casualties - 2am					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2am	**0**	**0**	**0**	**0**	**0**
Casualties - 2pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2pm	**0**	**0**	**0**	**0**	**0**
Casualties - 5pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 5pm	**0**	**0**	**0**	**0**	**0**
Merced					
Casualties - 2am					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2am	**0**	**0**	**0**	**0**	**0**
Casualties - 2pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0

	Injury Severity Level				
	Severity 1	Severity 2	Severity 3	Severity 4	Total
California					
Merced					
Casualties - 2pm					
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2pm	**0**	**0**	**0**	**0**	**0**
Casualties - 5pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 5pm	**0**	**0**	**0**	**0**	**0**
Mono					
Casualties - 2am					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2am	**0**	**0**	**0**	**0**	**0**
Casualties - 2pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2pm	**0**	**0**	**0**	**0**	**0**
Casualties - 5pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0

	Injury Severity Level				
	Severity 1	Severity 2	Severity 3	Severity 4	Total
California					
Mono					
Total Casualties - 5pm	**0**	**0**	**0**	**0**	**0**
San Bernardino					
Casualties - 2am					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2am	**0**	**0**	**0**	**0**	**0**
Casualties - 2pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2pm	**0**	**0**	**0**	**0**	**0**
Casualties - 5pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 5pm	**0**	**0**	**0**	**0**	**0**
Tulare					
Casualties - 2am					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2am	**0**	**0**	**0**	**0**	**0**
Casualties - 2pm					
Commuting	0	0	0	0	0

	Injury Severity Level				
	Severity 1	Severity 2	Severity 3	Severity 4	Total
California					
Tulare					
Casualties - 2pm					
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2pm	**0**	**0**	**0**	**0**	**0**
Casualties - 5pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 5pm	**0**	**0**	**0**	**0**	**0**
Tuolumne					
Casualties - 2am					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2am	**0**	**0**	**0**	**0**	**0**
Casualties - 2pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 2pm	**0**	**0**	**0**	**0**	**0**
Casualties - 5pm					
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0

	Injury Severity Level				
	Severity 1	Severity 2	Severity 3	Severity 4	Total
California					
Tuolumne					
Casualties - 5pm					
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Total Casualties - 5pm	**0**	**0**	**0**	**0**	**0**
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

June 05, 2024

All values are in thousands of tons.

	Brick, Wood & Others	Concrete & Steel	Total
California			
Fresno	0	0	1
Inyo	3	2	5
Kern	0	0	0
Kings	0	0	0
Madera	0	0	0
Mariposa	0	0	0
Merced	0	0	0
Mono	0	0	0
San Bernardino	0	0	0
Tulare	0	0	1
Tuolumne	0	0	0
Total	**4**	**3**	**7**
Region Total	**4**	**3**	**7**

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

June 5, 2024

All values are in thousands of dollars

	Capital Stock Losses					Income Losses				
	Cost Structural Damage	Cost Non-struct. Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
California										
Fresno	397	7,882	4,929	765	0.01	62	77	77	86	14,275
Inyo	3,815	25,144	11,992	1,234	0.59	1,522	1,651	1,785	1,258	48,400
Kern	84	2,400	1,453	207	0.00	9	13	15	21	4,202
Kings	14	568	382	54	0.00	2	4	5	4	1,032
Madera	8	432	279	39	0.00	0	0	1	1	761
Mariposa	0	2	1	0	0.00	0	0	0	0	3
Merced	1	4	4	2	0.00	0	0	0	0	12
Mono	7	186	92	8	0.00	1	0	0	2	296
San Bernardino	0	17	12	2	0.00	0	0	0	0	33

Study Region : Independencerev

Scenario : independencerev2011e_m7p31_se

	Capital Stock Losses					Income Losses				
	Cost Structural Damage	Cost Non-struct. Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	Total Loss
Tulare	473	8,289	4,676	852	0.01	55	73	82	94	14,594
Tuolumne	0	0	0	0	0.00	0	0	0	0	0
Total	**4,799**	**44,925**	**23,821**	**3,163**	**0.06**	**1,651**	**1,818**	**1,966**	**1,465**	**83,608**
Region Total	**4,799**	**44,925**	**23,821**	**3,163**	**0.06**	**1,651**	**1,818**	**1,966**	**1,465**	**83,608**

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

June 05, 2024

All values are in thousands of dollars

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
California								
Fresno								
Segments	0	0	0					0
Bridges	27	0	0					27
Tunnels	0	0	0					0
Facilities		231	0	21	0	0	1,004	1,255
Total	**27**	**231**	**0**	**21**	**0**	**0**	**1,004**	**1,283**
Inyo								
Segments	0	0	0					0
Bridges	3,879	0	0					3,879
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	5,558	5,558
Total	**3,879**	**0**	**0**	**0**	**0**	**0**	**5,558**	**9,437**
Kern								
Segments	0	0	0					0
Bridges	2	0	0					2
Tunnels	0	0	0					0
Facilities		180	0	64	0	0	902	1,146

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
Total	**2**	**180**	**0**	**64**	**0**	**0**	**902**	**1,147**
Kings								
Segments	0	0	0					0
Bridges	1	0	0					1
Tunnels	0	0	0					0
Facilities		128	0	41	0	0	359	529
Total	**1**	**128**	**0**	**41**	**0**	**0**	**359**	**530**
Madera								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		26	0	21	0	0	102	149
Total	**0**	**26**	**0**	**21**	**0**	**0**	**102**	**149**
Mariposa								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	48	0	0	6	53
Total	**0**	**0**	**0**	**48**	**0**	**0**	**6**	**53**
Merced								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		6	0	2	0	0	29	37

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
Total	**0**	**6**	**0**	**2**	**0**	**0**	**29**	**37**
Mono								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	41	0	0	376	417
Total	**0**	**0**	**0**	**41**	**0**	**0**	**376**	**417**
San Bernardino								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		31	0	2	0	0	28	62
Total	**0**	**31**	**0**	**2**	**0**	**0**	**28**	**62**
Tulare								
Segments	0	0	0					0
Bridges	41	0	0					41
Tunnels	0	0	0					0
Facilities		0	0	83	0	0	255	338
Total	**41**	**0**	**0**	**83**	**0**	**0**	**255**	**379**
Tuolumne								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	17	17

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
Total	**0**	**0**	**0**	**0**	**0**	**0**	**17**	**17**
Total	**3,951**	**601**	**0**	**323**	**0**	**0**	**8,636**	**13,512**
Region Total	**3,951**	**601**	**0**	**323**	**0**	**0**	**8,636**	**13,512**

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Direct Economic Loss For Utilities

June 05, 2024

All values are in thousands of dollars

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
California							
Fresno							
Facilities	0	492	0	13	392,886	7	393,398
Pipelines	272	137	0	0			409
Total	272	629	0	13	392,886	7	393,807
Inyo							
Facilities	0	0	0	0	108,415	114	108,529
Pipelines	975	490	0	0			1,465
Total	975	490	0	0	108,415	114	109,994
Kern							
Facilities	30	8	1	6	29,760	7	29,812
Pipelines	354	178	0	0			532
Total	384	186	1	6	29,760	7	30,344
Kings							
Facilities	0	0	0	4	5,844	1	5,849

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
Pipelines	74	37	0	0			111
Total	74	37	0	4	5,844	1	5,960
Madera							
Facilities	0	0	0	0	14,173	1	14,173
Pipelines	86	43	0	0			129
Total	86	43	0	0	14,173	1	14,302
Mariposa							
Facilities	0	131	0	0	42	0	173
Pipelines	14	7	0	0			20
Total	14	137	0	0	42	0	194
Merced							
Facilities	0	8	0	0	4	0	12
Pipelines	43	22	0	0			65
Total	43	30	0	0	4	0	77
Mono							
Facilities	0	0	0	0	29,702	0	29,702
Pipelines	60	30	0	0			91
Total	60	30	0	0	29,702	0	29,793
San Bernardino							
Facilities	0	0	0	9	5,455	0	5,463
Pipelines	109	55	0	0			164

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
Total	109	55	0	9	5,455	0	5,627
Tulare							
Facilities	28	369	0	0	4,057	5	4,459
Pipelines	188	94	0	0			282
Total	216	463	0	0	4,057	5	4,741
Tuolumne							
Facilities	0	3	0	0	1,427	0	1,430
Pipelines	15	8	0	0			23
Total	15	10	0	0	1,427	0	1,453
Total	**2,249**	**2,110**	**1**	**32**	**591,765**	**135**	**596,292**
Region Total	**2,249**	**2,110**	**1**	**32**	**591,765**	**135**	**596,292**

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™

FEMA

RiskMAP
Increasing Resilience Together

Shelter Summary Report

June 05, 2024

	# of Displaced Households	# of People Needing Short Term Shelter
California		
Fresno	0	0
Inyo	4	2
Kern	0	0
Kings	0	0
Madera	0	0
Mariposa	0	0
Merced	0	0
Mono	0	0
San Bernardino	0	0
Tulare	0	0
Tuolumne	0	0
Total	**4**	**2**
Region Total	**4**	**2**

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.

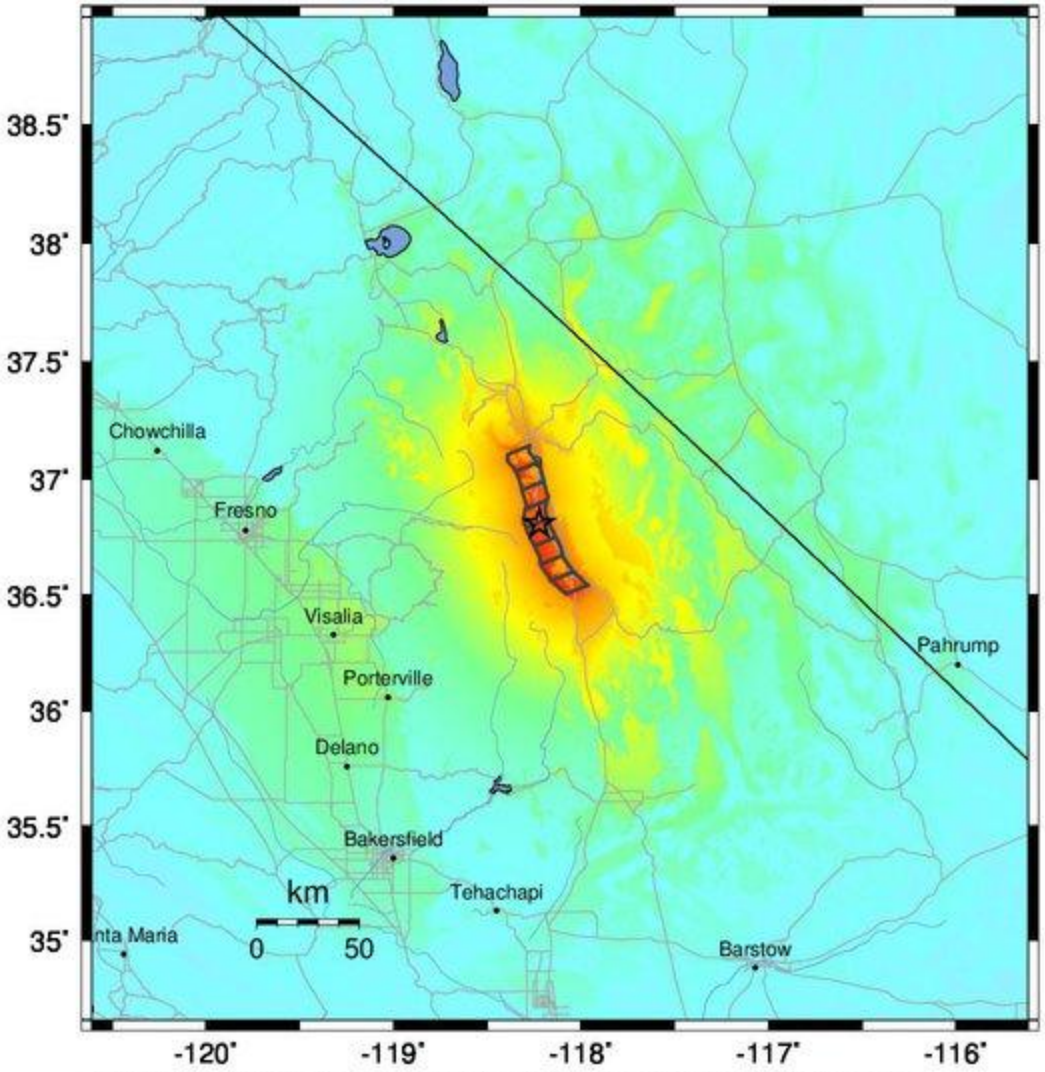
Study Region : Independencerev

Scenario : independencerev2011e_m7p31_se

-- Earthquake Planning Scenario --

ShakeMap for Independence rev - Median ground motions Scenario

Scenario Date: May 16, 2017 08:31:50 AM MDT M 7.3 N36.81 W118.22 Depth: 9.3km



PLANNING SCENARIO ONLY -- Map Version 10 Processed 2017-05-16 08:03:27 PM 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)