Hazus: Earthquake Global Risk Report

Region Name: PanamintValley

Earthquake Scenario: panamintvalleyshaw09_m7p38_se

Print Date: April 12, 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 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 67,877.47 square miles and contains 4,886 census tracts. There are over 7,005 thousand households in the region which has a total population of 21,220,383 peopleF. The distribution of population by Total Region and County is provided in Appendix B.

There are an estimated 5,961 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 253,219 and 185,129 (millions of dollars) , respectively.

Building and Lifeline Inventory

Building Inventory

Hazus estimates that there are 5,961 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 303 hospitals in the region with a total bed capacity of 55,906 beds. There are 6,838 schools, 1,159 fire stations, 394 police stations and 110 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 438,348.00 (millions of dollars). This inventory includes over 11,508.41 miles of highways, 10,189 bridges, 240,641.45 miles of pipes.

Table 1: Transportation System Lifeline Inventory

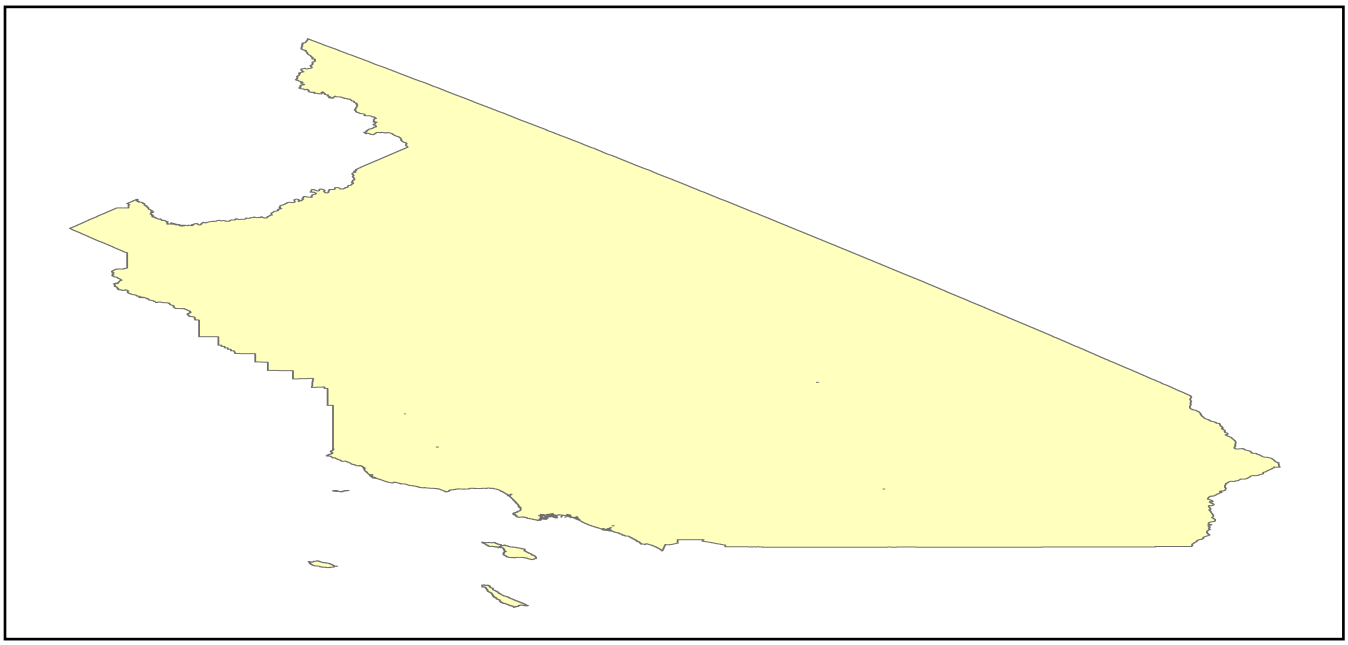
System	Component	# Locations/ # Segments	Replacement value (millions of dollars)
Highway	Bridges	10,189	56962.3498
	Segments	9,014	115730.4688
	Tunnels	55	511.9074
		Subtotal	**173204.7260**
Railways	Bridges	1,616	9195.0400
	Facilities	106	282.2780
	Segments	1,764	58785.5287
	Tunnels	0	0.0000
		Subtotal	**68262.8467**
Light Rail	Bridges	28	6.1737
	Facilities	80	2293.5200
	Segments	4	2829.7483
	Tunnels	0	0.0000
		Subtotal	**5129.4420**
Bus	Facilities	41	88.6997
		Subtotal	**88.6997**
Ferry	Facilities	16	21.2960
		Subtotal	**21.2960**
Port	Facilities	237	903.4072
		Subtotal	**903.4072**
Airport	Facilities	145	3952.6765
	Runways	153	1655.9371
		Subtotal	**5608.6136**
		Total	**253,219.00**

Table 2: Utility System Lifeline Inventory

System	Component	# Locations / Segments	Replacement value (millions of dollars)
Potable Water	Distribution Lines	NA	4775.2595
	Facilities	48	1886.1120
	Pipelines	0	0.0000
		Subtotal	**6661.3715**
Waste Water	Distribution Lines	NA	2865.1557
	Facilities	84	14443.9512
	Pipelines	0	0.0000
		Subtotal	**17309.1069**
Natural Gas	Distribution Lines	NA	1910.1038
	Facilities	39	1419.5739
	Pipelines	392	18507.7617
		Subtotal	**21837.4394**
Oil Systems	Facilities	64	7.5520
	Pipelines	0	0.0000
		Subtotal	**7.5520**
Electrical Power	Facilities	576	139268.1035
		Subtotal	**139268.1035**
Communication	Facilities	386	45.5480
		Subtotal	**45.5480**
		Total	**185,129.10**

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	panamintvalleyshaw09_m7p38_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	7.38
Depth (km)	NA
Rupture Length (Km)	NA
Rupture Orientation (degrees)	NA
Attenuation Function	NA

Direct Earthquake Damage

Building Damage

Hazus estimates that about 200 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

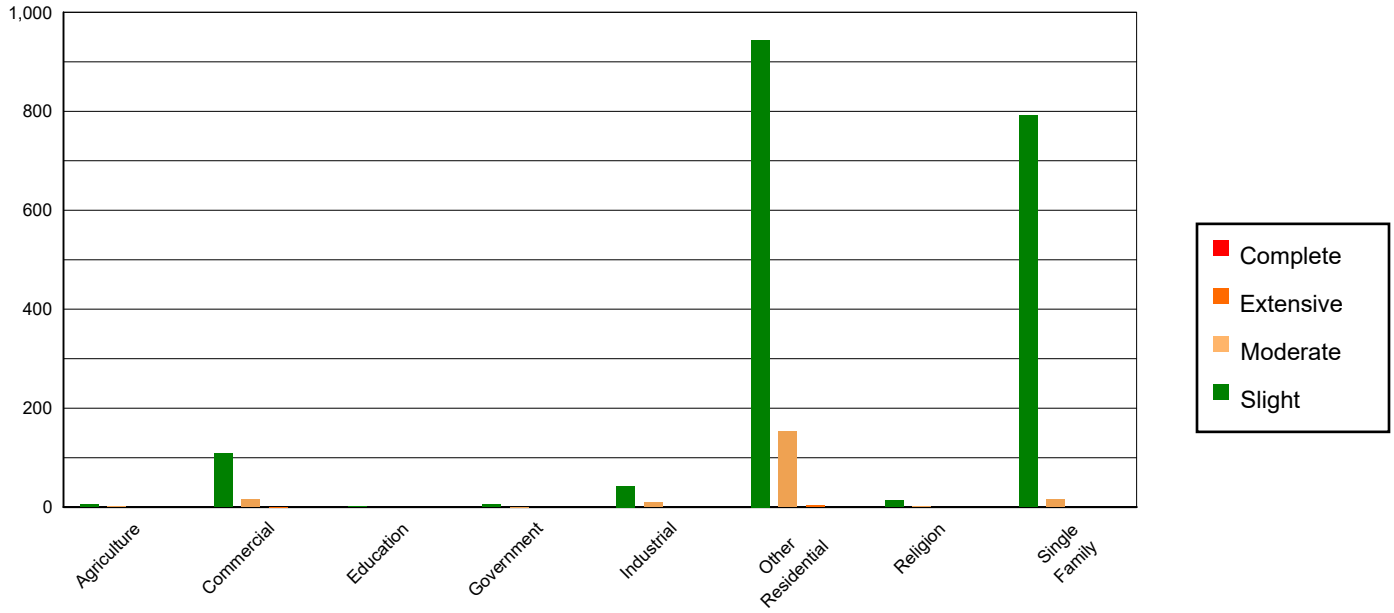


Table 3: Expected Building Damage by Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	19390.57	0.33	5.80	0.30	0.63	0.32	0.01	0.14	0.00	0.00
Commercial	409614.23	6.87	108.52	5.68	15.70	7.98	0.53	13.96	0.01	35.47
Education	11344.44	0.19	1.46	0.08	0.09	0.05	0.00	0.01	0.00	0.00
Government	14475.92	0.24	4.67	0.24	0.41	0.21	0.00	0.03	0.00	0.00
Industrial	108311.96	1.82	42.63	2.23	9.14	4.64	0.27	7.16	0.00	1.71
Other Residential	939738.13	15.77	943.76	49.38	153.41	77.93	2.69	70.40	0.01	25.60
Religion	21676.26	0.36	12.87	0.67	1.83	0.93	0.04	1.12	0.00	0.00
Single Family	4435327.71	74.42	791.35	41.41	15.66	7.95	0.27	7.18	0.01	37.22
Total	**5,959,879**		**1,911**		**197**		**4**		**0**	

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

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Wood	5210791.87	87.43	962.22	50.35	14.90	7.57	0.03	0.85	0.00	0.00
Steel	112129.46	1.88	68.94	3.61	14.16	7.19	0.44	11.40	0.00	1.71
Concrete	110951.91	1.86	36.86	1.93	4.21	2.14	0.14	3.65	0.00	0.00
Precast	55285.58	0.93	28.81	1.51	4.87	2.47	0.06	1.61	0.00	0.00
RM	262753.05	4.41	42.34	2.22	6.71	3.41	0.05	1.22	0.00	0.00
URM	30547.51	0.51	48.86	2.56	9.07	4.61	0.74	19.30	0.02	98.29
MH	177419.84	2.98	723.03	37.83	142.96	72.61	2.37	61.97	0.00	0.00
Total	**5,959,879**		**1,911**		**197**		**4**		**0**	

*Note:

RM Reinforced Masonry
URM Unreinforced Masonry
MH Manufactured Housing

Essential Facility Damage

Before the earthquake, the region had 55,906 hospital beds available for use. On the day of the earthquake, the model estimates that only 55,847 hospital beds (100.00%) are available for use by patients already in the hospital and those injured by the earthquake. After one week, 100.00% 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	303	0	0	303
Schools	6,838	0	0	6,838
EOCs	110	0	0	110
PoliceStations	394	0	0	394
FireStations	1,159	0	0	1,159

Transportation Lifeline Damage

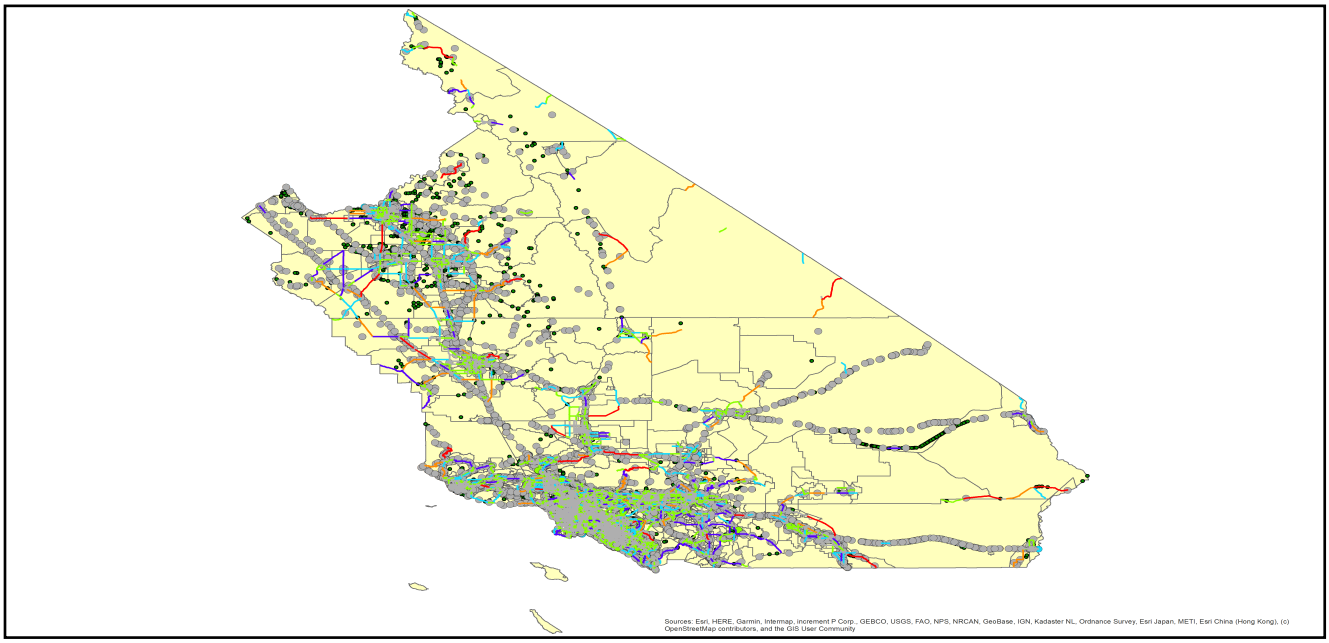


Table 6: Expected Damage to the Transportation Systems

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	9,014	0	0	9,014	9,014
	Bridges	10,189	0	0	10,189	10,189
	Tunnels	55	0	0	55	55
Railways	Segments	1,764	0	0	1,764	1,764
	Bridges	1,616	0	0	1,616	1,616
	Tunnels	0	0	0	0	0
	Facilities	106	0	0	106	106
Light Rail	Segments	4	0	0	4	4
	Bridges	28	0	0	28	28
	Tunnels	0	0	0	0	0
	Facilities	80	0	0	80	80
Bus	Facilities	41	0	0	41	41
Ferry	Facilities	16	0	0	16	16
Port	Facilities	237	0	0	237	237
Airport	Facilities	145	0	0	145	145
	Runways	153	0	0	153	153

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	48	0	0	48	48
Waste Water	84	0	0	84	84
Natural Gas	39	0	0	39	39
Oil Systems	64	0	0	64	64
Electrical Power	576	2	0	576	576
Communication	386	0	0	386	386

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

System	Total Pipelines Length (miles)	Number of Leaks	Number of Breaks
Potable Water	148,360	964	241
Waste Water	89,016	484	121
Natural Gas	3,265	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	7,005,968	1	0	0	0	0
Electric Power		0	0	0	0	0

Induced Earthquake Damage

Fire Following Earthquake

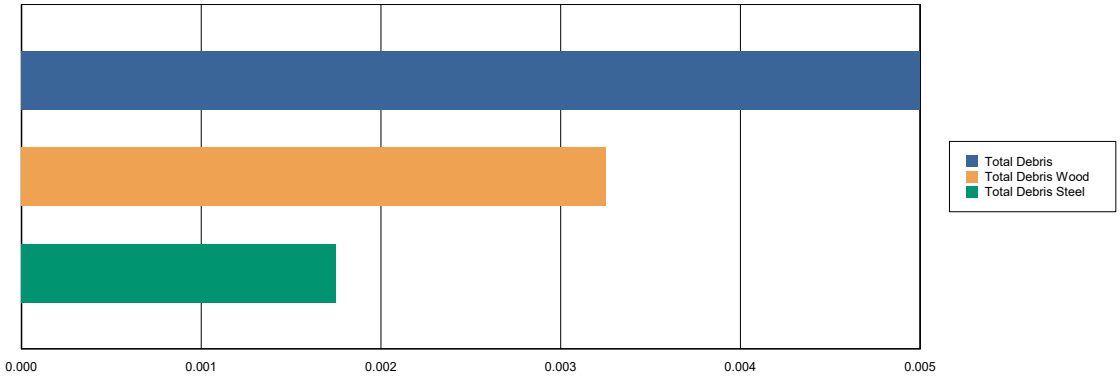
Fires often occur after an earthquake. Because of the number of fires and the lack of water to fight the fires, they can often burn out of control. Hazus uses a Monte Carlo simulation model to estimate the number of ignitions and the amount of burnt area. For this scenario, the model estimates that there 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 5,000 tons of debris will be generated. Of the total amount, Brick/Wood comprises 65.00% 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 200 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	200 (@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 0 households to be displaced due to the earthquake. Of these, 0 people (out of a total population of 21,220,383) 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
0	0

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	0.02	0.00	0.00	0.00
	Commuting	0.00	0.00	0.00	0.00
	Educational	0.00	0.00	0.00	0.00
	Hotels	0.00	0.00	0.00	0.00
	Industrial	0.02	0.00	0.00	0.00
	Other-Residential	2.54	0.13	0.00	0.00
	Single Family	0.95	0.01	0.00	0.00
	Total	**4**	**0**	**0**	**0**
2 PM	Commercial	1.25	0.06	0.00	0.00
	Commuting	0.00	0.00	0.00	0.00
	Educational	0.31	0.01	0.00	0.00
	Hotels	0.00	0.00	0.00	0.00
	Industrial	0.18	0.01	0.00	0.00
	Other-Residential	0.92	0.05	0.00	0.00
	Single Family	0.33	0.00	0.00	0.00
	Total	**3**	**0**	**0**	**0**
5 PM	Commercial	0.82	0.04	0.00	0.00
	Commuting	0.00	0.00	0.01	0.00
	Educational	0.02	0.00	0.00	0.00
	Hotels	0.00	0.00	0.00	0.00
	Industrial	0.11	0.01	0.00	0.00
	Other-Residential	0.91	0.05	0.00	0.00
	Single Family	0.34	0.00	0.00	0.00
	Total	**2**	**0**	**0**	**0**

Economic Loss

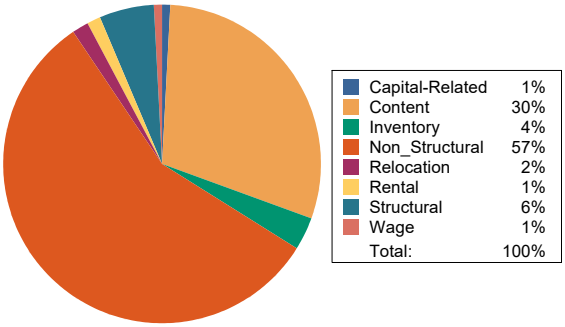
The total economic loss estimated for the earthquake is 701.78 (millions of dollars), which includes building and lifeline related losses based on the region's available inventory. The following three sections provide more detailed information about these losses.

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 91.94 (millions of dollars); 5 % 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 44 % 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)

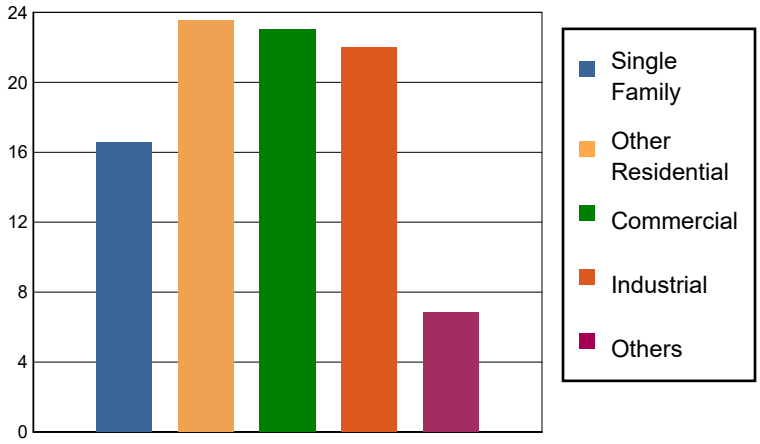


Table 11: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
Income Losses							
	Wage	0.0000	0.1294	0.5582	0.0666	0.0708	0.8250
	Capital-Related	0.0000	0.0549	0.6271	0.0500	0.0169	0.7489
	Rental	0.0693	0.6152	0.5098	0.0620	0.0166	1.2729
	Relocation	0.0863	0.5214	0.4072	0.2916	0.0848	1.3913
	Subtotal	**0.1556**	**1.3209**	**2.1023**	**0.4702**	**0.1891**	**4.2381**
Capital Stock Losses							
	Structural	1.1477	1.5722	1.0393	1.1278	0.2456	5.1326
	Non_Structural	10.6157	15.7997	11.0400	10.7828	3.8145	52.0527
	Content	4.6208	4.8258	7.3610	8.0875	2.3344	27.2295
	Inventory	0.0000	0.0000	1.4982	1.5402	0.2482	3.2866
	Subtotal	**16.3842**	**22.1977**	**20.9385**	**21.5383**	**6.6427**	**87.7014**
	Total	**16.54**	**23.52**	**23.04**	**22.01**	**6.83**	**91.94**

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	115730.4688	0.0000	0.00
	Bridges	56962.3498	0.0979	0.00
	Tunnels	511.9074	0.0000	0.00
	Subtotal	**173204.7260**	**0.0979**	
Railways	Segments	58785.5287	0.0000	0.00
	Bridges	9195.0400	0.2839	0.00
	Tunnels	0.0000	0.0000	0.00
	Facilities	282.2780	1.3987	0.50
	Subtotal	**68262.8467**	**1.6826**	
Light Rail	Segments	2829.7483	0.0000	0.00
	Bridges	6.1737	0.0000	0.00
	Tunnels	0.0000	0.0000	0.00
	Facilities	2293.5200	2.4541	0.11
	Subtotal	**5129.4420**	**2.4541**	
Bus	Facilities	88.6997	0.3732	0.42
	Subtotal	**88.6997**	**0.3732**	
Ferry	Facilities	21.2960	0.0128	0.06
	Subtotal	**21.2960**	**0.0128**	
Port	Facilities	903.4072	0.8198	0.09
	Subtotal	**903.4072**	**0.8198**	
Airport	Facilities	3952.6765	11.2964	0.29
	Runways	1655.9371	0.0000	0.00
	Subtotal	**5608.6136**	**11.2964**	
	Total	**253,219.03**	**16.74**	

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	1886.1120	0.2448	0.01
	Distribution Lines	4775.2595	4.3399	0.09
	Subtotal	**6661.3715**	**4.5847**	
Waste Water	Pipelines	0.0000	0.0000	0.00
	Facilities	14443.9512	2.1116	0.01
	Distribution Lines	2865.1557	2.1800	0.08
	Subtotal	**17309.1069**	**4.2916**	
Natural Gas	Pipelines	18507.7617	0.0000	0.00
	Facilities	1419.5739	1.1606	0.08
	Distribution Lines	1910.1038	0.7469	0.04
	Subtotal	**21837.4394**	**1.9075**	
Oil Systems	Pipelines	0.0000	0.0000	0.00
	Facilities	7.5520	0.0013	0.02
	Subtotal	**7.5520**	**0.0013**	
Electrical Power	Facilities	139268.1035	582.2395	0.42
	Subtotal	**139268.1035**	**582.2395**	
Communication	Facilities	45.5480	0.0814	0.18
	Subtotal	**45.5480**	**0.0814**	
	Total	**185,129.12**	**593.11**	

Appendix A: County Listing for the Region

Fresno,CA

Inyo,CA

Kern,CA

Kings,CA

Los Angeles,CA

Mono,CA

Orange,CA

Riverside,CA

San Bernardino,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					
	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
	Los Angeles	10,014,009	950,697	566,995	1,517,692
	Mono	13,195	3,293	1,083	4,377
	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
	Tulare	473,117	43,262	31,210	74,472
	Ventura	843,843	99,299	52,072	151,371
Total Region		**21,220,383**	**2,169,228**	**1,248,743**	**3,417,975**

Panamint Valley

Building Inspection Tagging (Counts)

Inspected		Restricted		Unsafe	
Residential	169	Residential	2.96	Residential	0.0151
Commercial	15.7	Commercial	0.533	Commercial	0.00853
Industrial	9.14	Industrial	0.273	Industrial	0.00041
Agricultural	0.626	Agricultural	0.00536	Agricultural	0
Educational	0.0929	Educational	0.000204	Educational	0
Government	0.413	Government	0.0012	Government	0
Religious	1.83	Religious	0.0427	Religious	0

Total Economic Loss

Total: $91.9M

Top Counties	State	Total
San Bernardino	CA	$42.5M
Kern	CA	$28.7M
Inyo	CA	$16.2M
Tulare	CA	$3.36M
Los Angeles	CA	$944K
Fresno	CA	$214K
Riverside	CA	$40K

Injuries & Fatalities

Total Day: 3.12
Total Night: 3.68

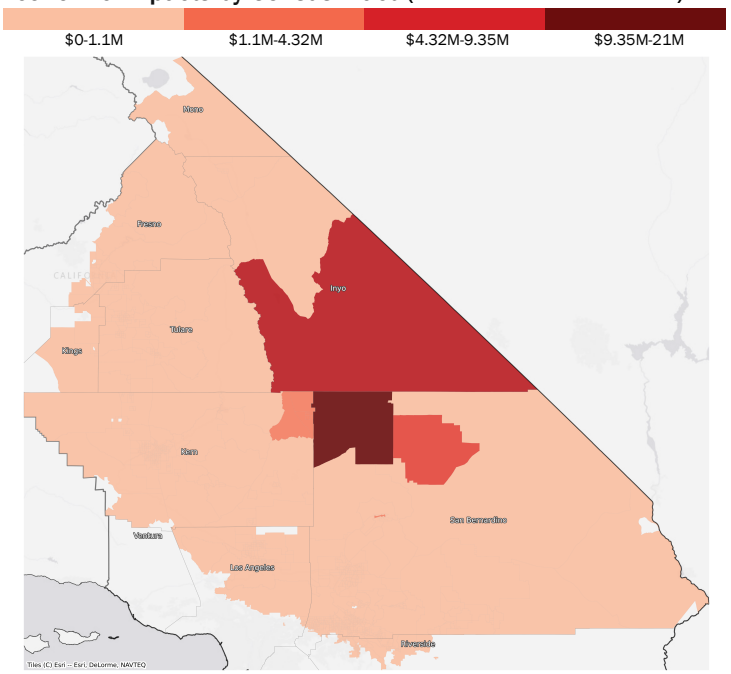
Top Counties	State	Injuries (day/night)	Fatalities (day/night)
San Bernardino	CA	1.44/1.87	0.00147/0.000826
Kern	CA	1.07/1.27	0.000074/0.000013
Inyo	CA	0.569/0.513	0.000319/0.000082
Tulare	CA	0.0359/0.0183	0.00001/0.000003
Los Angeles	CA	0.0097/0.00669	0.000002/0
Fresno	CA	0.00253/0.00104	0.000001/0
Riverside	CA	0.000234/0.0002	0/0

Displaced Households & Short-Term Shelter Needs

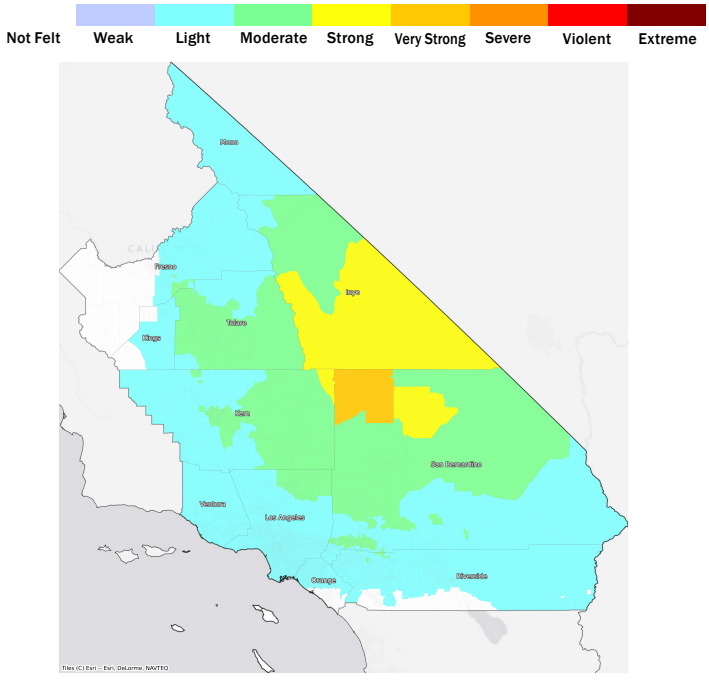
Total Displaced: 0.987
Total Needing Shelter: 0.601

Top Counties	State	Displaced	Needing Shelter
San Bernardino	CA	0.757	0.478
Inyo	CA	0.19	0.103
Kern	CA	0.0391	0.0209
Fresno	CA	0	0
Kings	CA	0	0
Los Angeles	CA	0	0
Mono	CA	0	0

Economic Impacts by Census Tract (944 Tracts with Losses)



Ground Shaking



Debris

Total Tons: 5.75K
Total Truckloads: 230

Type	Tons
Brick, Wood, and Other	3.73K
Concrete & Steel	2.02K

Panamint Valley

Debris Generated by Census Tract

California Department of Conservation
California Geological Survey

Study Region: Panamint Valley
Scenario: panamintvalleyshaw09_m7p38_se

Debris Generated *(in tons)*

- 0
- >0 - 100
- >100 - 500
- >500 - 1,000
- >1,000 - 1,700

Panamint Valley

Displaced Households by Census Tract

California Department of Conservation
California Geological Survey

Study Region: Panamint Valley
Scenario: panamintvalleyshaw09_m7p38_se

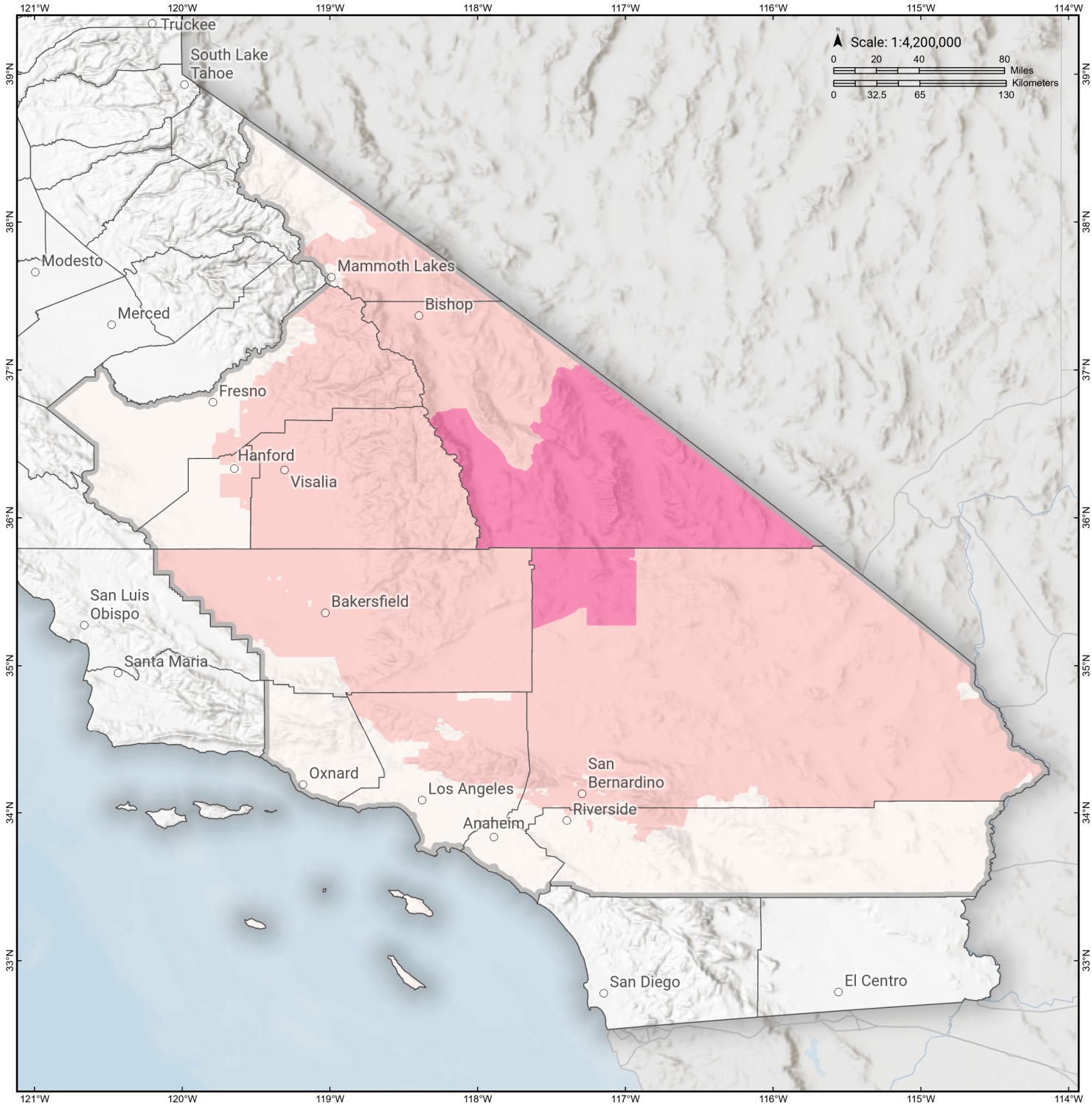
Displaced Households

- 0
- 1

Panamint Valley

Loss Ratio by Census Tract

California Department of Conservation
California Geological Survey



Study Region: Panamint Valley
Scenario: panamintvalleyshaw09_m7p38_se

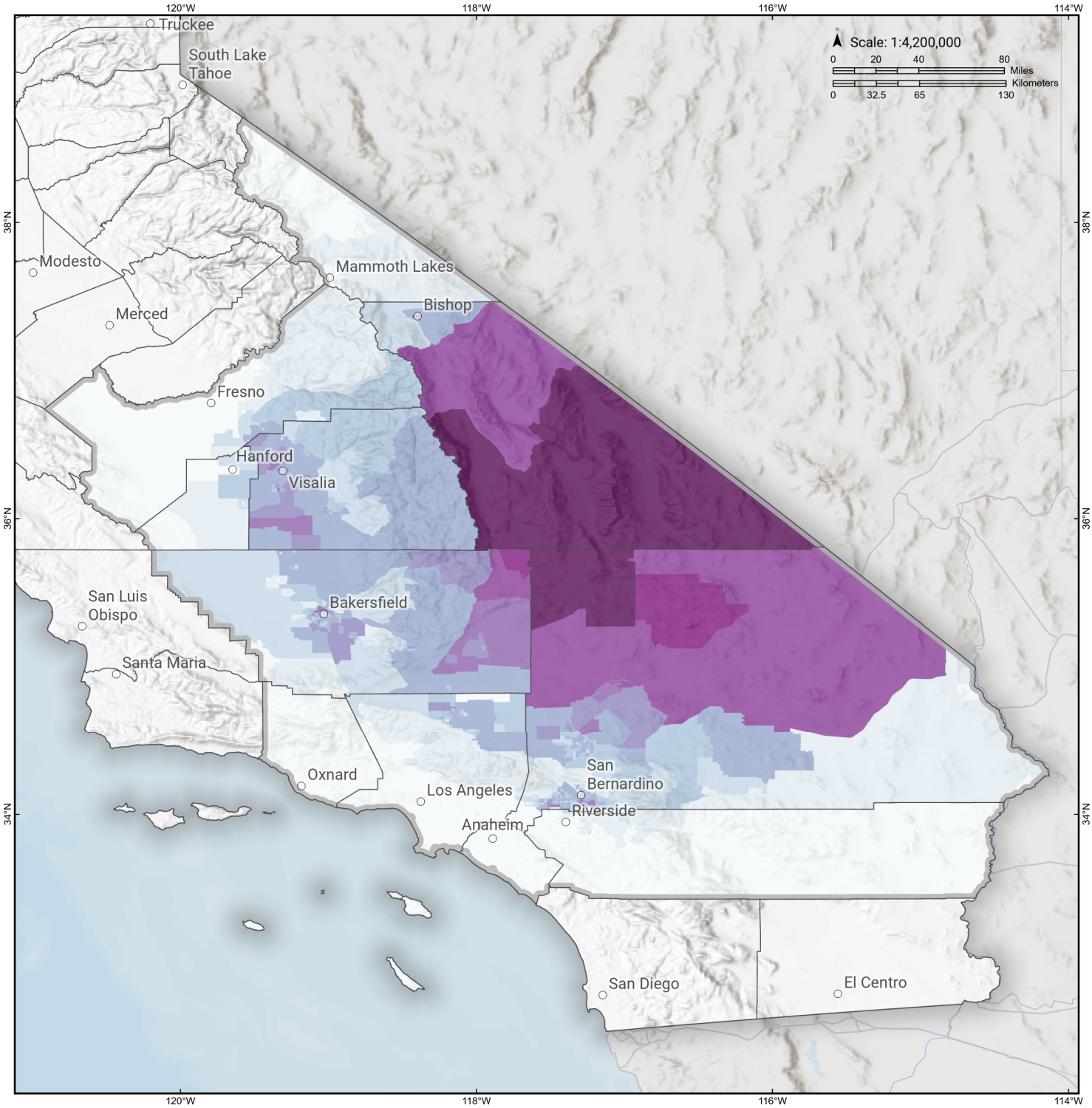
Loss Ratio *(ratio of building related economic loss to exposed value of buildings)*

- 0%
- >0 - 1%
- >1 - 3%

Panamint Valley

Total Building Related Economic Loss by Census Tract

California Department of Conservation
California Geological Survey



Study Region: Panamint Valley
Scenario: panamintvalleyshaw09_m7p38_se

Economic Loss *(in thousands of USD $)*

0	>50 - 100
>0 - 1	>100 - 500
>1 - 5	>500 - 2,000
>5 - 10	>2,000 - 10,000
>10 - 50	>10,000 - 21,000

Building Damage by Count by General Occupancy

RiskMAP
Increasing Resilience Together

April 12, 2024

	# of Buildings					
	None	Slight	Moderate	Extensive	Complete	Total
California						
Fresno						
Agriculture	3,421	0	0	0	0	3,421
Commercial	21,054	0	0	0	0	21,054
Education	602	0	0	0	0	602
Government	291	0	0	0	0	291
Industrial	5,348	0	0	0	0	5,348
Religion	1,507	0	0	0	0	1,507
Other Residential	40,973	0	0	0	0	40,973
Single Family	226,425	0	0	0	0	226,425
Inyo						
Agriculture	29	2	0	0	0	32
Commercial	694	21	5	0	0	721
Education	41	0	0	0	0	41
Government	98	3	0	0	0	101
Industrial	246	9	2	0	0	257
Religion	54	3	1	0	0	57
Other Residential	3,792	215	42	1	0	4,050
Single Family	4,369	76	1	0	0	4,446
Kern						

		# of Buildings					
		None	Slight	Moderate	Extensive	Complete	Total
	Agriculture	*4,643*	*2*	*0*	*0*	*0*	*4,645*
	Commercial	*15,523*	*41*	*3*	*0*	*0*	*15,567*
	Education	*461*	*1*	*0*	*0*	*0*	*462*
	Government	*442*	*1*	*0*	*0*	*0*	*443*
	Industrial	*6,034*	*12*	*1*	*0*	*0*	*6,047*
	Religion	*1,519*	*4*	*0*	*0*	*0*	*1,524*
	Other Residential	*54,063*	*413*	*45*	*0*	*0*	*54,520*
	Single Family	*204,720*	*417*	*2*	*0*	*0*	*205,139*
Kings							
	Agriculture	*306*	*0*	*0*	*0*	*0*	*306*
	Commercial	*2,318*	*0*	*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	*4,342*	*0*	*0*	*0*	*0*	*4,342*
	Single Family	*36,245*	*0*	*0*	*0*	*0*	*36,245*
Los Angeles							
	Agriculture	*2,032*	*0*	*0*	*0*	*0*	*2,032*
	Commercial	*190,860*	*1*	*0*	*0*	*0*	*190,861*
	Education	*5,486*	*0*	*0*	*0*	*0*	*5,486*
	Government	*3,031*	*0*	*0*	*0*	*0*	*3,031*
	Industrial	*53,126*	*0*	*0*	*0*	*0*	*53,126*
	Religion	*10,651*	*0*	*0*	*0*	*0*	*10,651*
	Other Residential	*481,666*	*5*	*0*	*0*	*0*	*481,671*

		# of Buildings					
		None	Slight	Moderate	Extensive	Complete	Total
	Single Family	*1,803,140*	*0*	*0*	*0*	*0*	*1,803,140*
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*
	Religion	*32*	*0*	*0*	*0*	*0*	*32*
	Other Residential	*1,759*	*0*	*0*	*0*	*0*	*1,759*
	Single Family	*7,704*	*0*	*0*	*0*	*0*	*7,704*
Orange							
	Agriculture	*1,135*	*0*	*0*	*0*	*0*	*1,135*
	Commercial	*68,340*	*0*	*0*	*0*	*0*	*68,340*
	Education	*1,890*	*0*	*0*	*0*	*0*	*1,890*
	Government	*650*	*0*	*0*	*0*	*0*	*650*
	Industrial	*18,795*	*0*	*0*	*0*	*0*	*18,795*
	Religion	*2,057*	*0*	*0*	*0*	*0*	*2,057*
	Other Residential	*85,718*	*0*	*0*	*0*	*0*	*85,718*
	Single Family	*706,212*	*0*	*0*	*0*	*0*	*706,212*
Riverside							
	Agriculture	*1,713*	*0*	*0*	*0*	*0*	*1,713*
	Commercial	*46,357*	*0*	*0*	*0*	*0*	*46,357*
	Education	*990*	*0*	*0*	*0*	*0*	*990*
	Government	*7,175*	*0*	*0*	*0*	*0*	*7,175*
	Industrial	*6,409*	*0*	*0*	*0*	*0*	*6,409*

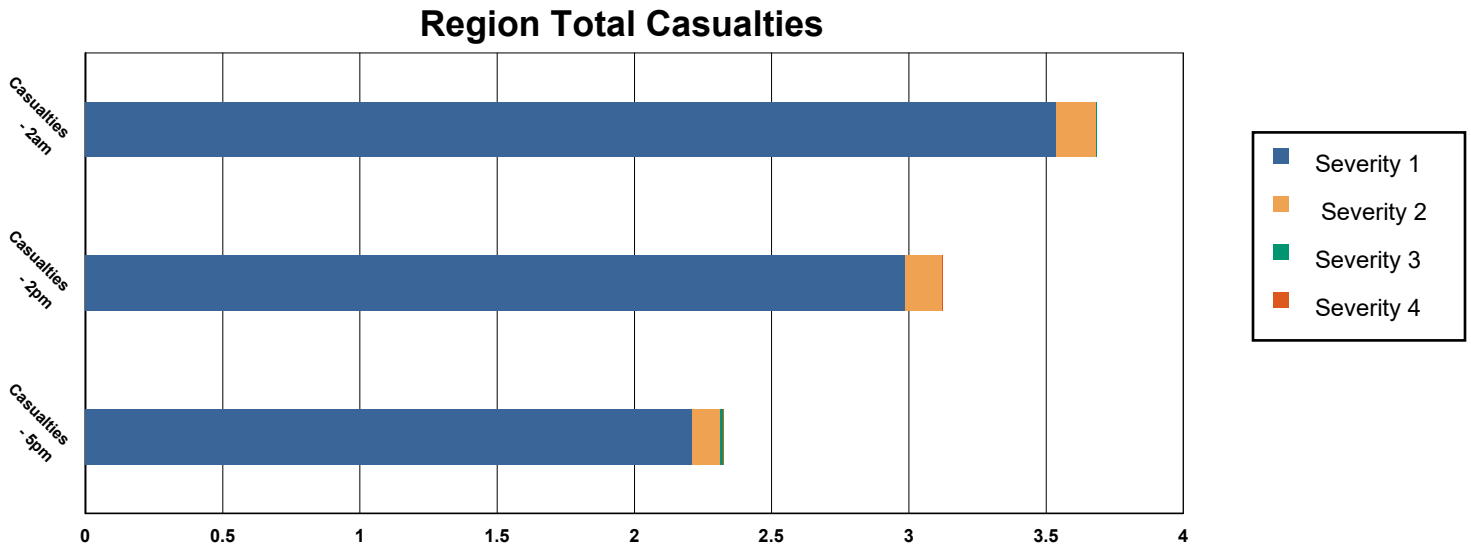
	# of Buildings					
	None	Slight	Moderate	Extensive	Complete	Total
Religion	*1,319*	*0*	*0*	*0*	*0*	*1,319*
Other Residential	*122,799*	*0*	*0*	*0*	*0*	*122,799*
Single Family	*605,455*	*0*	*0*	*0*	*0*	*605,455*
San Bernardino						
Agriculture	*1,814*	*1*	*0*	*0*	*0*	*1,815*
Commercial	*39,991*	*43*	*7*	*0*	*0*	*40,041*
Education	*985*	*0*	*0*	*0*	*0*	*985*
Government	*1,237*	*1*	*0*	*0*	*0*	*1,238*
Industrial	*9,446*	*21*	*6*	*0*	*0*	*9,474*
Religion	*2,313*	*6*	*1*	*0*	*0*	*2,320*
Other Residential	*98,450*	*302*	*67*	*2*	*0*	*98,821*
Single Family	*525,056*	*298*	*13*	*0*	*0*	*525,367*
Tulare						
Agriculture	*3,554*	*1*	*0*	*0*	*0*	*3,555*
Commercial	*8,870*	*3*	*0*	*0*	*0*	*8,873*
Education	*269*	*0*	*0*	*0*	*0*	*269*
Government	*461*	*0*	*0*	*0*	*0*	*461*
Industrial	*2,147*	*1*	*0*	*0*	*0*	*2,148*
Religion	*827*	*0*	*0*	*0*	*0*	*827*
Other Residential	*20,013*	*9*	*0*	*0*	*0*	*20,022*
Single Family	*112,034*	*0*	*0*	*0*	*0*	*112,034*
Ventura						
Agriculture	*598*	*0*	*0*	*0*	*0*	*598*
Commercial	*14,953*	*0*	*0*	*0*	*0*	*14,953*
Education	*497*	*0*	*0*	*0*	*0*	*497*

	# of Buildings					
	None	Slight	Moderate	Extensive	Complete	Total
Government	*1,001*	*0*	*0*	*0*	*0*	*1,001*
Industrial	*6,097*	*0*	*0*	*0*	*0*	*6,097*
Religion	*1,187*	*0*	*0*	*0*	*0*	*1,187*
Other Residential	*26,163*	*0*	*0*	*0*	*0*	*26,163*
Single Family	*203,968*	*0*	*0*	*0*	*0*	*203,968*
Total	**5,959,879**	**1,911**	**197**	**4**	**0**	**5,961,991**
Region Total	**5,959,879**	**1,911**	**197**	**4**	**0**	**5,961,991**

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

April 12, 2024



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

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

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

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

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

	Injury Severity Level				
	Severity 1	Severity 2	Severity 3	Severity 4	Total
California					
Ventura					
Casualties - 5pm					
Single Family	0	0	0	0	0
Industrial	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

April 12, 2024

All values are in thousands of tons.

	Brick, Wood & Others	Concrete & Steel	Total
California			
Fresno	0	0	0
Kings	0	0	0
Tulare	0	0	0
Inyo	1	0	1
Riverside	0	0	0
San Bernardino	2	1	3
Ventura	0	0	0
Kern	1	0	2
Orange	0	0	0
Los Angeles	0	0	0
Mono	0	0	0
Total	**4**	**2**	**6**
Region Total	**4**	**2**	**6**

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 : PanamintValley

Scenario : panamintvalleyshaw09_m7p38_se

Direct Economic Losses For Buildings

April 12, 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										
Inyo	907	8,854	4,439	406	0.20	295	384	411	482	16,179
San Bernardino	2,649	23,472	12,799	1,759	0.01	846	204	217	506	42,451
Riverside	0	23	15	1	0.00	0	0	0	0	40
Fresno	3	112	82	15	0.00	0	0	0	1	214
Kings	0	7	5	1	0.00	0	0	0	0	14
Tulare	37	1,825	1,227	244	0.00	3	6	7	9	3,359
Mono	0	0	0	0	0.00	0	0	0	0	1
Kern	1,525	17,201	8,326	827	0.01	247	153	187	273	28,740
Ventura	0	0	0	0	0.00	0	0	0	0	0

Study Region : PanamintValley

Scenario : panamintvalleyshaw09_m7p38_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
Orange	0	0	0	0	0.00	0	0	0	0	0
Los Angeles	11	558	336	34	0.00	0	1	1	2	944
Total	**5,133**	**52,053**	**27,230**	**3,287**	**0.02**	**1,392**	**749**	**825**	**1,273**	**91,941**
Region Total	**5,133**	**52,053**	**27,230**	**3,287**	**0.02**	**1,392**	**749**	**825**	**1,273**	**91,941**

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

April 12, 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	0	0	0					0
Tunnels	0	0	0					0
Facilities		26	0	0	0	0	108	133
Total	**0**	**26**	**0**	**0**	**0**	**0**	**108**	**134**
Inyo								
Segments	0	0	0					0
Bridges	10	0	0					10
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	2,940	2,940
Total	**10**	**0**	**0**	**0**	**0**	**0**	**2,940**	**2,950**
Kern								
Segments	0	0	0					0
Bridges	3	1	0					4
Tunnels	0	0	0					0
Facilities		111	0	83	0	0	1,417	1,611

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
Total	**3**	**112**	**0**	**83**	**0**	**0**	**1,417**	**1,615**
Kings								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		34	0	0	0	0	34	68
Total	**0**	**34**	**0**	**0**	**0**	**0**	**34**	**68**
Los Angeles								
Segments	0	0	0					0
Bridges	27	0	0					27
Tunnels	0	0	0					0
Facilities		134	2,454	35	738	10	3,030	6,401
Total	**27**	**134**	**2,454**	**35**	**738**	**10**	**3,030**	**6,428**
Mono								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	5	0	0	23	27
Total	**0**	**0**	**0**	**5**	**0**	**0**	**23**	**27**
Orange								
Segments	0	0	0					0
Bridges	1	0	0					1
Tunnels	0	0	0					0
Facilities		17	0	0	8	0	440	465

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
Total	**1**	**17**	**0**	**0**	**8**	**0**	**440**	**466**
Riverside								
Segments	0	0	0					0
Bridges	2	0	0					2
Tunnels	0	0	0					0
Facilities		60	0	37	0	0	207	304
Total	**2**	**60**	**0**	**37**	**0**	**0**	**207**	**306**
San Bernardino								
Segments	0	0	0					0
Bridges	53	283	0					336
Tunnels	0	0	0					0
Facilities		1,003	0	129	0	0	2,785	3,917
Total	**53**	**1,286**	**0**	**129**	**0**	**0**	**2,785**	**4,253**
Tulare								
Segments	0	0	0					0
Bridges	1	0	0					1
Tunnels	0	0	0					0
Facilities		0	0	83	0	0	255	338
Total	**1**	**0**	**0**	**83**	**0**	**0**	**255**	**339**
Ventura								
Segments	0	0	0					0
Bridges	1	0	0					1
Tunnels	0	0	0					0
Facilities		14	0	2	73	3	57	150

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
Total	1	14	0	2	73	3	57	151
Total	98	1,683	2,454	373	820	13	11,296	16,737
Region Total	98	1,683	2,454	373	820	13	11,296	16,737

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

April 12, 2024

All values are in thousands of dollars

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
California							
Fresno							
Facilities	0	126	0	0	5,547	0	5,672
Pipelines	63	32	0	0			95
Total	63	157	0	0	5,547	0	5,768
Inyo							
Facilities	0	0	0	0	66,438	8	66,446
Pipelines	1,048	526	0	0			1,575
Total	1,048	526	0	0	66,438	8	68,021
Kern							
Facilities	85	248	1	6	86,783	41	87,164
Pipelines	581	292	0	0			872
Total	665	540	1	6	86,783	41	88,037
Kings							
Facilities	0	0	0	0	465	0	465

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
Pipelines	49	25	0	0			74
Total	49	25	0	0	465	0	539
Los Angeles							
Facilities	9	49	0	13	19,137	1	19,209
Pipelines	540	271	0	0			811
Total	549	320	0	13	19,137	1	20,020
Mono							
Facilities	0	0	0	0	2,058	0	2,058
Pipelines	28	14	0	0			43
Total	28	14	0	0	2,058	0	2,101
Orange							
Facilities	1	15	0	1	125	0	143
Pipelines	129	65	0	0			193
Total	130	80	0	1	125	0	336
Riverside							
Facilities	6	272	0	75	2,752	0	3,106
Pipelines	181	91	0	0			271
Total	187	362	0	75	2,752	0	3,377
San Bernardino							
Facilities	112	999	0	1,062	393,838	25	396,036
Pipelines	1,502	754	0	0			2,256

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
Total	1,614	1,753	0	1,062	393,838	25	398,292
Tulare							
Facilities	28	369	0	0	4,057	5	4,459
Pipelines	147	74	0	0			221
Total	175	443	0	0	4,057	5	4,680
Ventura							
Facilities	3	34	0	3	1,041	0	1,080
Pipelines	73	37	0	0			109
Total	76	70	0	3	1,041	0	1,189
Total	**4,585**	**4,292**	**1**	**1,161**	**582,240**	**81**	**592,359**
Region Total	**4,585**	**4,292**	**1**	**1,161**	**582,240**	**81**	**592,359**

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

April 12, 2024

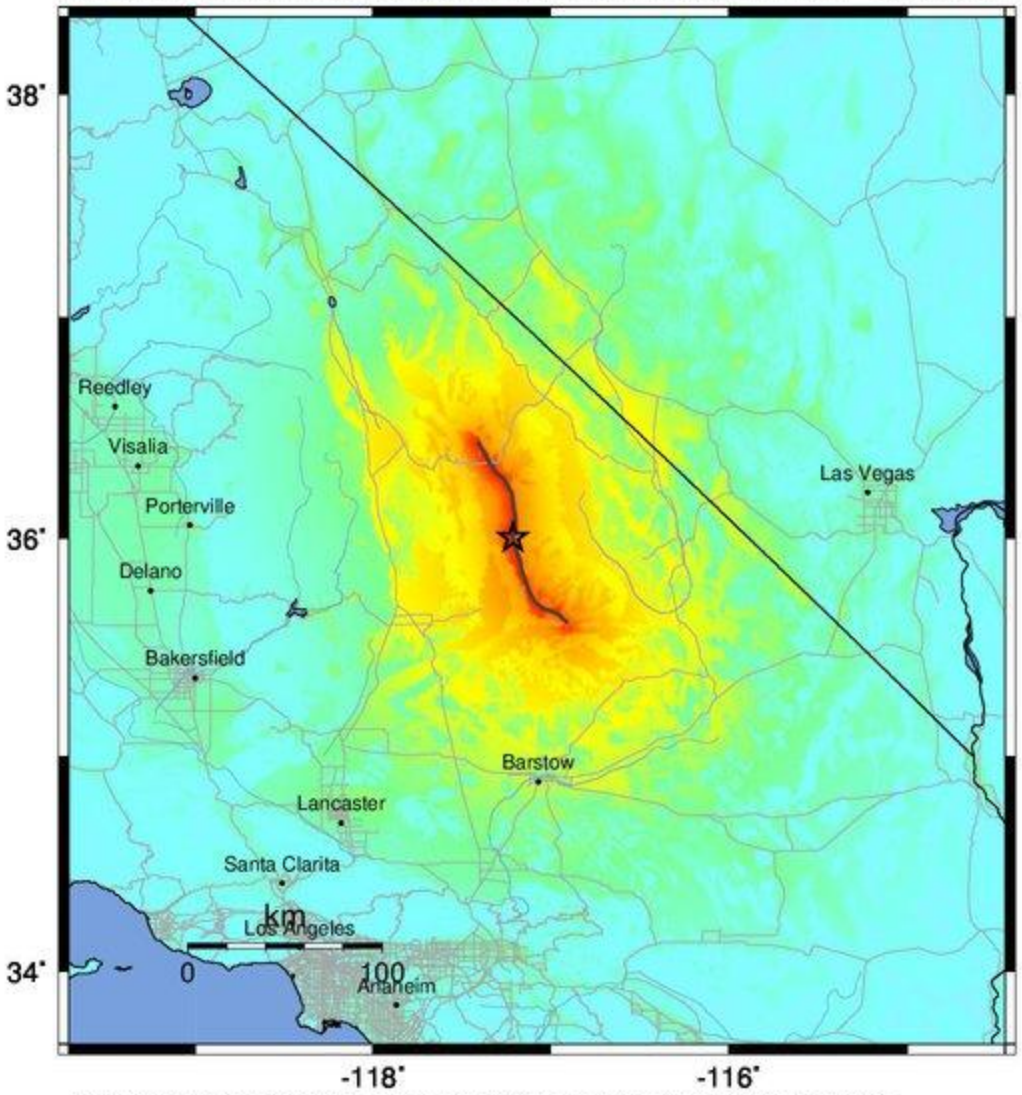
	# of Displaced Households	# of People Needing Short Term Shelter
California		
Fresno	0	0
Kings	0	0
Tulare	0	0
Inyo	0	0
Riverside	0	0
San Bernardino	1	0
Ventura	0	0
Kern	0	0
Orange	0	0
Los Angeles	0	0
Mono	0	0
Total	**1**	**1**
Region Total	**1**	**1**

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 Panamint Valley - Median ground motions Scenario

Scenario Date: May 16, 2017 08:32:00 AM MDT M 7.4 N36.00 W117.21 Depth: 8.3km



PLANNING SCENARIO ONLY -- Map Version 10 Processed 2017-05-16 11:51:58 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)