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## Hazus: Earthquake Global Risk Report

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**Region Name:** Polaris

**Earthquake Scenario:** polaris2011cfmellbge\_m6p79\_se

**Print Date:** May 06, 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 19 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 30,491.91 square miles and contains 1,033 census tracts. There are over 1,560 thousand households in the region which has a total population of 4,402,557 people. The distribution of population by Total Region and County is provided in Appendix B.

There are an estimated 1,505 thousand buildings in the region with a total building replacement value (excluding contents) of 830,526 (millions of dollars). Approximately 92.00 % of the buildings (and 67.00% of the building value) are associated with residential housing.

The replacement value of the transportation and utility lifeline systems is estimated to be 84,334 and 82,587 (millions of dollars) , respectively.

## Building and Lifeline Inventory

### Building Inventory

Hazus estimates that there are 1,505 thousand buildings in the region which have an aggregate total replacement value of 830,526 (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 79 hospitals in the region with a total bed capacity of 8,011 beds. There are 1,668 schools, 625 fire stations, 163 police stations and 30 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 166,921.00 (millions of dollars). This inventory includes over 5,005.14 miles of highways, 4,502 bridges, 109,975.83 miles of pipes.

**Table 1: Transportation System Lifeline Inventory**

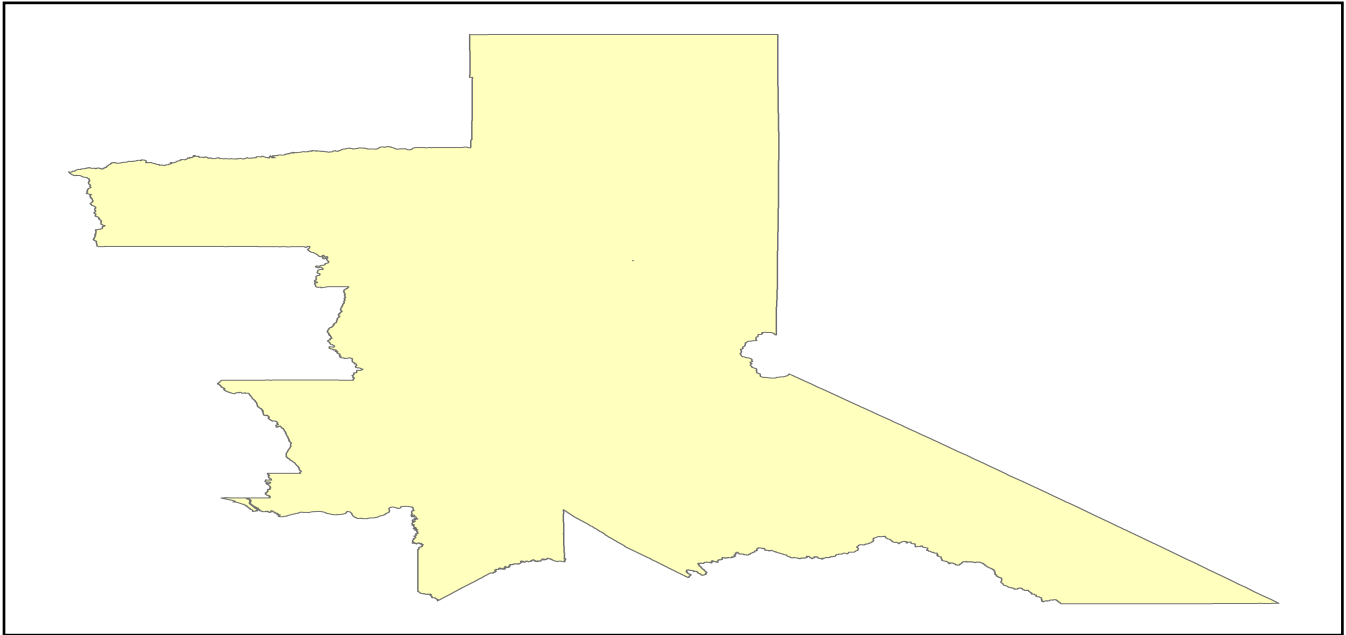
System	Component	# Locations/ # Segments	Replacement value (millions of dollars)
<b>Highway</b>	Bridges	4,502	17290.9668
	Segments	2,724	38780.5126
	Tunnels	8	43.1476
	<b>Subtotal</b>		<b>56114.6270</b>
<b>Railways</b>	Bridges	798	4540.6200
	Facilities	31	82.5530
	Segments	1,904	19964.0537
	Tunnels	0	0.0000
	<b>Subtotal</b>		<b>24587.2267</b>
<b>Light Rail</b>	Bridges	0	0.0000
	Facilities	55	314.0500
	Segments	3	1508.4477
	Tunnels	0	0.0000
	<b>Subtotal</b>		<b>1822.4977</b>
<b>Bus</b>	Facilities	13	28.7346
	<b>Subtotal</b>		<b>28.7346</b>
<b>Ferry</b>	Facilities	9	11.9790
	<b>Subtotal</b>		<b>11.9790</b>
<b>Port</b>	Facilities	111	423.1147
	<b>Subtotal</b>		<b>423.1147</b>
<b>Airport</b>	Facilities	59	776.4925
	Runways	74	569.4554
	<b>Subtotal</b>		<b>1345.9479</b>
		<b>Total</b>	<b>84,334.10</b>

**Table 2: Utility System Lifeline Inventory**

System	Component	# Locations / Segments	Replacement value (millions of dollars)
<b>Potable Water</b>	Distribution Lines	NA	2186.8267
	Facilities	9	353.6460
	Pipelines	0	0.0000
		<b>Subtotal</b>	<b>2540.4727</b>
<b>Waste Water</b>	Distribution Lines	NA	1312.0960
	Facilities	74	12724.4332
	Pipelines	0	0.0000
		<b>Subtotal</b>	<b>14036.5292</b>
<b>Natural Gas</b>	Distribution Lines	NA	874.7307
	Facilities	1	41.2435
	Pipelines	568	7195.5121
		<b>Subtotal</b>	<b>8111.4863</b>
<b>Oil Systems</b>	Facilities	5	0.5900
	Pipelines	0	0.0000
		<b>Subtotal</b>	<b>0.5900</b>
<b>Electrical Power</b>	Facilities	186	57883.5118
		<b>Subtotal</b>	<b>57883.5118</b>
<b>Communication</b>	Facilities	127	14.9860
		<b>Subtotal</b>	<b>14.9860</b>
	<b>Total</b>		<b>82,587.60</b>

## Earthquake Scenario

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



<b>Scenario Name</b>	polaris2011cfmellbge_m6p79_se
<b>Type of Earthquake</b>	User-defined
<b>Fault Name</b>	NA
<b>Historical Epicenter ID #</b>	NA
<b>Probabilistic Return Period</b>	NA
<b>Longitude of Epicenter</b>	NA
<b>Latitude of Epicenter</b>	NA
<b>Earthquake Magnitude</b>	6.79
<b>Depth (km)</b>	NA
<b>Rupture Length (Km)</b>	NA
<b>Rupture Orientation (degrees)</b>	NA
<b>Attenuation Function</b>	NA

## Direct Earthquake Damage

### Building Damage

Hazus estimates that about 3,476 buildings will be at least moderately damaged. This is over 0.00 % of the buildings in the region. There are an estimated 21 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

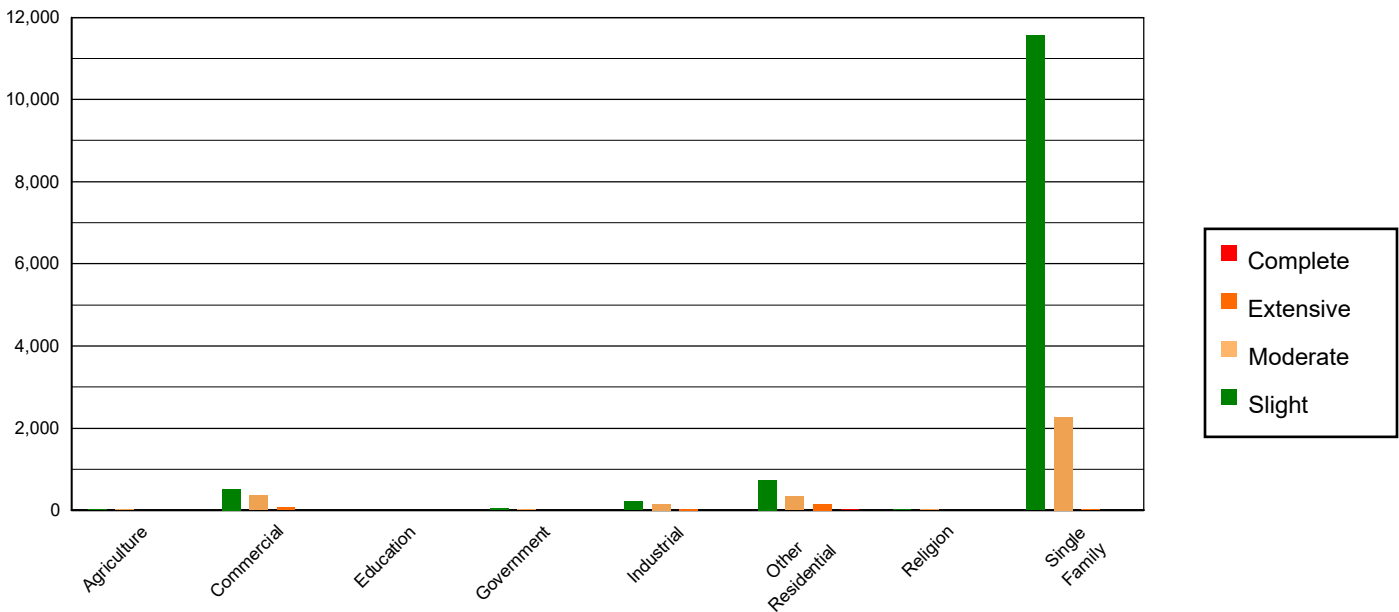


Table 3: Expected Building Damage by Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
<b>Agriculture</b>	7053.47	0.47	16.54	0.13	9.92	0.31	2.52	0.88	0.55	2.55
<b>Commercial</b>	84079.95	5.65	519.82	3.96	353.70	11.16	68.56	23.89	4.97	23.07
<b>Education</b>	2599.62	0.17	8.85	0.07	3.81	0.12	0.66	0.23	0.05	0.24
<b>Government</b>	2879.63	0.19	45.18	0.34	24.55	0.77	2.61	0.91	0.03	0.16
<b>Industrial</b>	24272.35	1.63	216.31	1.65	154.70	4.88	29.54	10.29	2.10	9.72
<b>Other Residential</b>	184648.89	12.40	738.95	5.63	334.17	10.55	156.22	54.44	13.77	63.88
<b>Religion</b>	5321.68	0.36	22.48	0.17	13.98	0.44	2.79	0.97	0.07	0.34
<b>Single Family</b>	1178362.54	79.13	11564.16	88.06	2273.21	71.75	24.08	8.39	0.01	0.05
<b>Total</b>	<b>1,489,218</b>		<b>13,132</b>		<b>3,168</b>		<b>287</b>		<b>22</b>	

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

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
<b>Wood</b>	1291953.50	86.75	12315.90	93.78	2448.54	77.29	28.91	10.07	0.11	0.50
<b>Steel</b>	25641.24	1.72	154.99	1.18	142.01	4.48	33.90	11.81	2.03	9.41
<b>Concrete</b>	27501.26	1.85	179.40	1.37	109.22	3.45	16.57	5.77	1.05	4.86
<b>Precast</b>	18210.64	1.22	102.86	0.78	120.37	3.80	32.37	11.28	1.51	7.01
<b>RM</b>	63420.78	4.26	164.56	1.25	151.57	4.78	27.67	9.64	0.48	2.24
<b>URM</b>	18151.97	1.22	24.95	0.19	15.04	0.47	7.82	2.72	3.43	15.90
<b>MH</b>	44338.74	2.98	189.62	1.44	181.30	5.72	139.74	48.69	12.95	60.09
<b>Total</b>	<b>1,489,218</b>		<b>13,132</b>		<b>3,168</b>		<b>287</b>		<b>22</b>	

\*Note:

RM      Reinforced Masonry  
 URM     Unreinforced Masonry  
 MH      Manufactured Housing

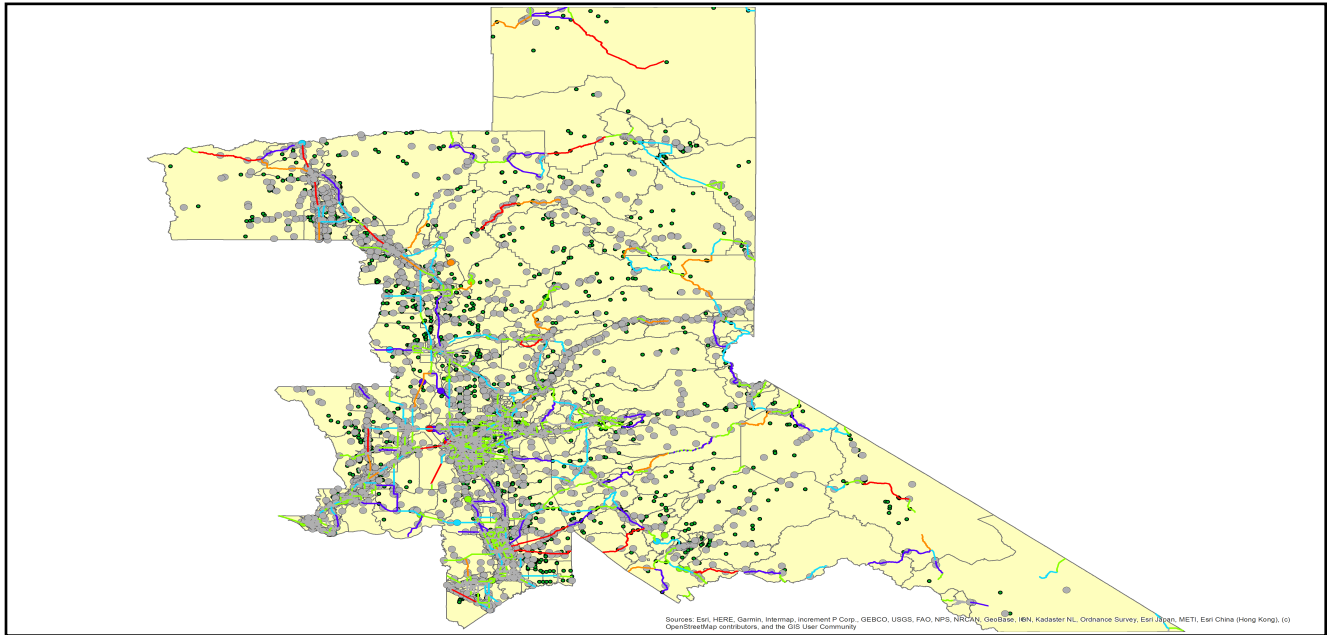
## Essential Facility Damage

Before the earthquake, the region had 8,011 hospital beds available for use. On the day of the earthquake, the model estimates that only 7,823 hospital beds (98.00%) 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	79	1	0	77
Schools	1,668	7	0	1,652
EOCs	30	0	0	30
PoliceStations	163	0	0	160
FireStations	625	1	0	615

## 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	2,724	0	0	2,724	2,724
	Bridges	4,502	0	0	4,502	4,502
	Tunnels	8	0	0	8	8
Railways	Segments	1,904	0	0	1,904	1,904
	Bridges	798	0	0	798	798
	Tunnels	0	0	0	0	0
	Facilities	31	1	0	31	31
Light Rail	Segments	3	0	0	3	3
	Bridges	0	0	0	0	0
	Tunnels	0	0	0	0	0
	Facilities	55	0	0	55	55
Bus	Facilities	13	0	0	13	13
Ferry	Facilities	9	0	0	9	9
Port	Facilities	111	0	0	111	111
Airport	Facilities	59	1	0	59	59
	Runways	74	0	0	74	74

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	9	0	0	9	9
Waste Water	74	0	0	74	74
Natural Gas	1	0	0	1	1
Oil Systems	5	0	0	5	5
Electrical Power	186	3	0	184	186
Communication	127	0	0	127	127

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

System	Total Pipelines Length (miles)	Number of Leaks	Number of Breaks
Potable Water	67,942	546	137
Waste Water	40,765	274	69
Natural Gas	1,269	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	1,560,236	21	0	0	0	0
Electric Power		7,148	4,916	2,244	254	9

## Induced Earthquake Damage

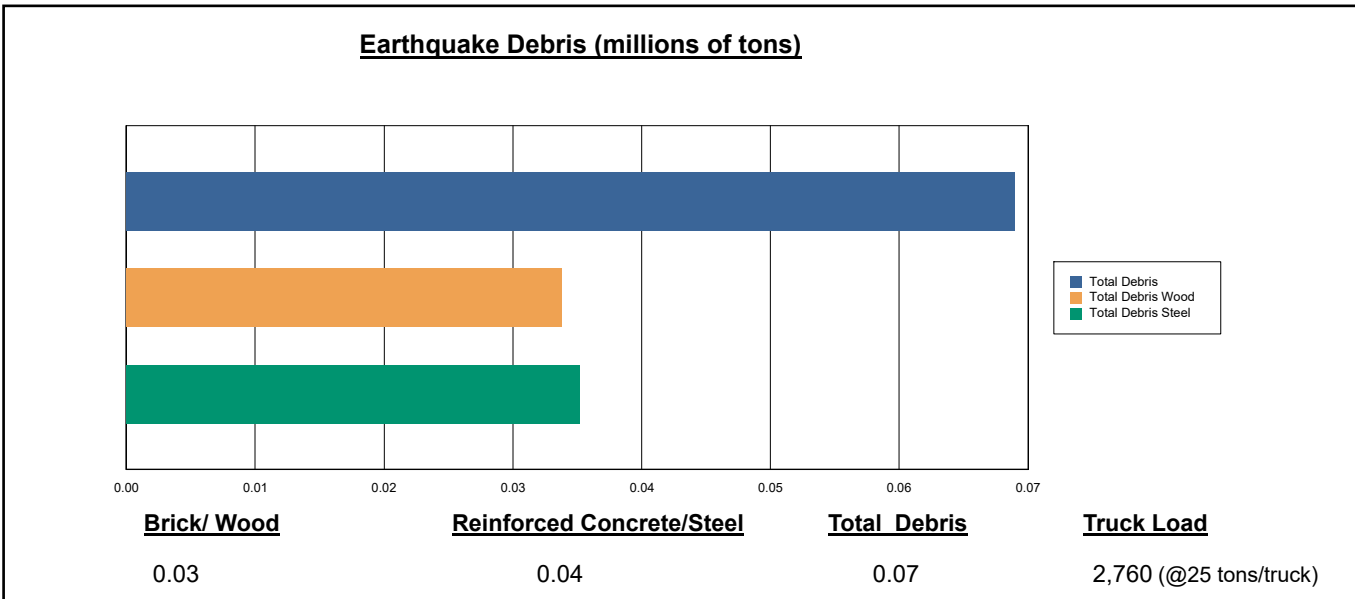
### Fire Following Earthquake

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.

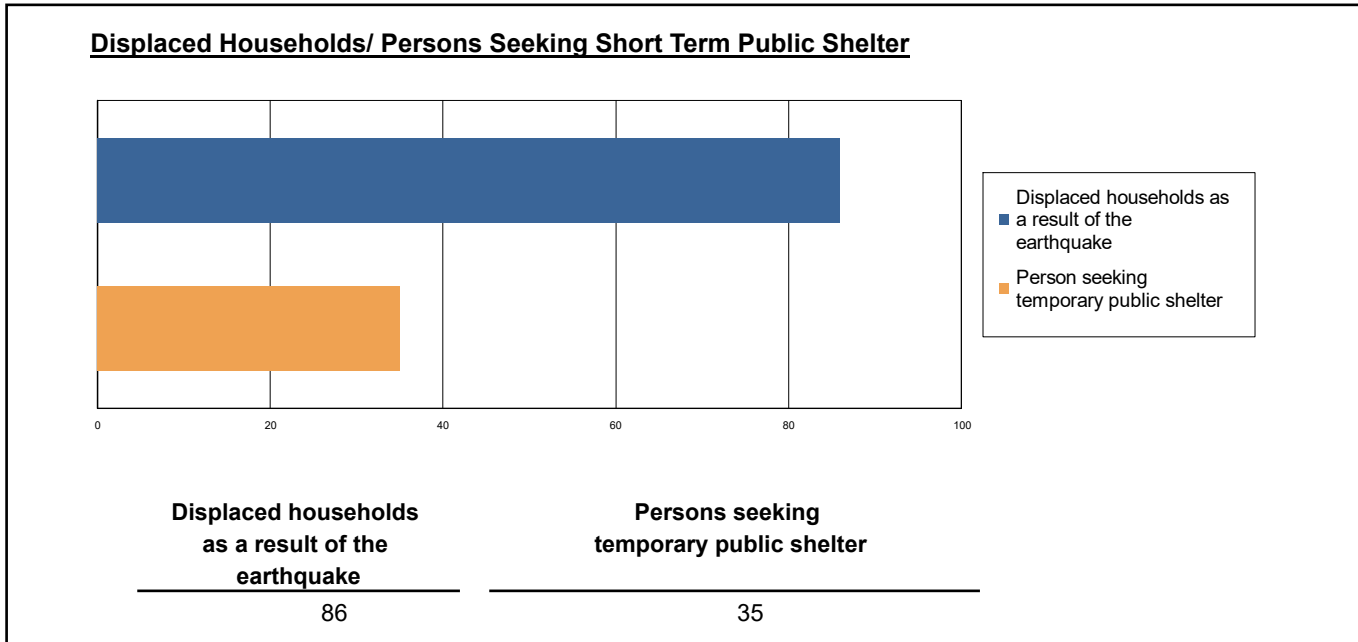
The model estimates that a total of 69,000 tons of debris will be generated. Of the total amount, Brick/Wood comprises 49.00% of the total, with the remainder being Reinforced Concrete/Steel. If the debris tonnage is converted to an estimated number of truckloads, it will require 2,760 truckloads (@25 tons/truck) to remove the debris generated by the earthquake.



## Social Impact

### Shelter Requirement

Hazus estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 86 households to be displaced due to the earthquake. Of these, 35 people (out of a total population of 4,402,557) will seek temporary shelter in public shelters.



### Casualties

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

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

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

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

**Table 10: Casualty Estimates**

		Level 1	Level 2	Level 3	Level 4
<b>2 AM</b>	Commercial	0.35	0.05	0.00	0.01
	Commuting	0.00	0.01	0.01	0.00
	Educational	0.00	0.00	0.00	0.00
	Hotels	0.05	0.00	0.00	0.00
	Industrial	0.69	0.10	0.01	0.02
	Other-Residential	7.02	0.85	0.03	0.06
	Single Family	14.80	0.96	0.00	0.00
	<b>Total</b>	<b>23</b>	<b>2</b>	<b>0</b>	<b>0</b>
<b>2 PM</b>	Commercial	23.38	3.43	0.30	0.59
	Commuting	0.04	0.07	0.10	0.02
	Educational	3.46	0.38	0.01	0.02
	Hotels	0.01	0.00	0.00	0.00
	Industrial	5.09	0.72	0.06	0.11
	Other-Residential	2.08	0.24	0.01	0.02
	Single Family	4.54	0.28	0.00	0.00
	<b>Total</b>	<b>39</b>	<b>5</b>	<b>0</b>	<b>1</b>
<b>5 PM</b>	Commercial	16.38	2.51	0.24	0.45
	Commuting	0.77	1.45	1.93	0.40
	Educational	0.01	0.00	0.00	0.00
	Hotels	0.01	0.00	0.00	0.00
	Industrial	3.18	0.45	0.04	0.07
	Other-Residential	2.55	0.31	0.01	0.02
	Single Family	5.49	0.37	0.00	0.00
	<b>Total</b>	<b>28</b>	<b>5</b>	<b>2</b>	<b>1</b>

## Economic Loss

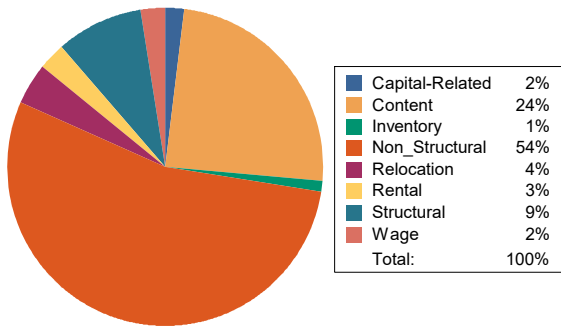
The total economic loss estimated for the earthquake is 1,255.87 (millions of dollars), which includes building and lifeline related losses based on the region's available inventory. The following three sections provide more detailed information about these losses.

## Building-Related Losses

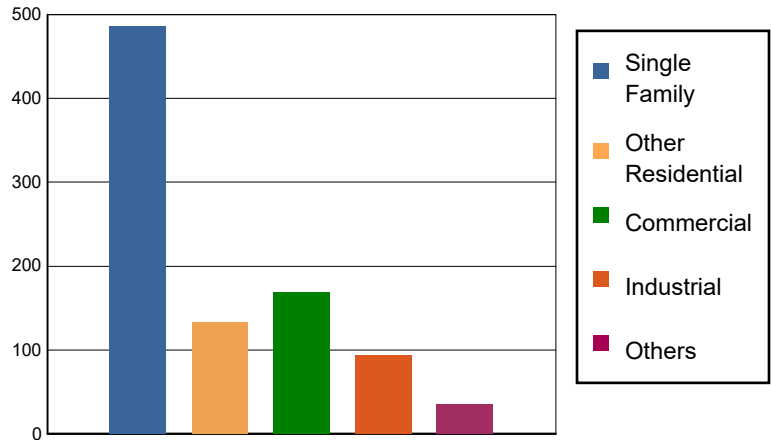
The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability 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 917.61 (millions of dollars); 11 % 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 67 % 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
<b>Income Losses</b>							
	Wage	0.0000	5.8195	14.3652	0.9516	1.0830	22.2193
	Capital-Related	0.0000	2.4701	14.6981	0.5597	0.1714	17.8993
	Rental	5.3149	10.6222	6.9650	0.7132	0.5172	24.1325
	Relocation	18.5710	3.7197	9.7047	2.5823	2.9384	37.5161
	<b>Subtotal</b>	<b>23.8859</b>	<b>22.6315</b>	<b>45.7330</b>	<b>4.8068</b>	<b>4.7100</b>	<b>101.7672</b>
<b>Capital Stock Losses</b>							
	Structural	46.3171	9.9606	15.6533	7.6472	3.9360	83.5142
	Non_Structural	292.5500	78.7876	65.0357	44.2506	17.2282	497.8521
	Content	123.2054	21.9906	37.6532	32.2155	8.8310	223.8957
	Inventory	0.0000	0.0000	4.8537	5.1119	0.6135	10.5791
	<b>Subtotal</b>	<b>462.0725</b>	<b>110.7388</b>	<b>123.1959</b>	<b>89.2252</b>	<b>30.6087</b>	<b>815.8411</b>
	<b>Total</b>	<b>485.96</b>	<b>133.37</b>	<b>168.93</b>	<b>94.03</b>	<b>35.32</b>	<b>917.61</b>

## 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	38780.5126	0.0000	0.00
	Bridges	17290.9668	11.7944	0.07
	Tunnels	43.1476	0.0764	0.18
	<b>Subtotal</b>	<b>56114.6270</b>	<b>11.8708</b>	
Railways	Segments	19964.0537	0.0000	0.00
	Bridges	4540.6200	1.2173	0.03
	Tunnels	0.0000	0.0000	0.00
	Facilities	82.5530	1.2999	1.57
	<b>Subtotal</b>	<b>24587.2267</b>	<b>2.5172</b>	
Light Rail	Segments	1508.4477	0.0000	0.00
	Bridges	0.0000	0.0000	0.00
	Tunnels	0.0000	0.0000	0.00
	Facilities	314.0500	2.5355	0.81
	<b>Subtotal</b>	<b>1822.4977</b>	<b>2.5355</b>	
Bus	Facilities	28.7346	0.2902	1.01
	<b>Subtotal</b>	<b>28.7346</b>	<b>0.2902</b>	
Ferry	Facilities	11.9790	0.0085	0.07
	<b>Subtotal</b>	<b>11.9790</b>	<b>0.0085</b>	
Port	Facilities	423.1147	0.7546	0.18
	<b>Subtotal</b>	<b>423.1147</b>	<b>0.7546</b>	
Airport	Facilities	776.4925	10.0711	1.30
	Runways	569.4554	0.0000	0.00
	<b>Subtotal</b>	<b>1345.9479</b>	<b>10.0711</b>	
<b>Total</b>		<b>84,334.13</b>	<b>28.05</b>	

**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	353.6460	0.4057	0.11
	Distribution Lines	2186.8267	2.4585	0.11
	<b>Subtotal</b>	<b>2540.4727</b>	<b>2.8642</b>	
Waste Water	Pipelines	0.0000	0.0000	0.00
	Facilities	12724.4332	18.9594	0.15
	Distribution Lines	1312.0960	1.2349	0.09
	<b>Subtotal</b>	<b>14036.5292</b>	<b>20.1943</b>	
Natural Gas	Pipelines	7195.5121	0.0000	0.00
	Facilities	41.2435	0.0000	0.00
	Distribution Lines	874.7307	0.4231	0.05
	<b>Subtotal</b>	<b>8111.4863</b>	<b>0.4231</b>	
Oil Systems	Pipelines	0.0000	0.0000	0.00
	Facilities	0.5900	0.0000	0.00
	<b>Subtotal</b>	<b>0.5900</b>	<b>0.0000</b>	
Electrical Power	Facilities	57883.5118	286.7119	0.50
	<b>Subtotal</b>	<b>57883.5118</b>	<b>286.7119</b>	
Communication	Facilities	14.9860	0.0155	0.10
	<b>Subtotal</b>	<b>14.9860</b>	<b>0.0155</b>	
	<b>Total</b>	<b>82,587.58</b>	<b>310.21</b>	

---

## Appendix A: County Listing for the Region

Alpine,CA

Amador,CA

Butte,CA

Calaveras,CA

El Dorado,CA

Lassen,CA

Mono,CA

Nevada,CA

Placer,CA

Plumas,CA

Sacramento,CA

San Joaquin,CA

Sierra,CA

Solano,CA

Sutter,CA

Tehama,CA

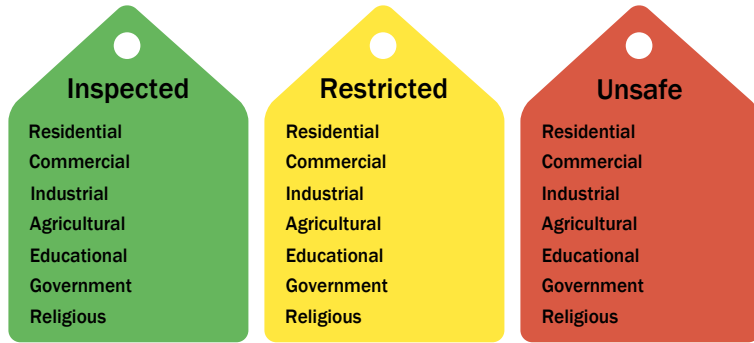
Tuolumne,CA

Yolo,CA

Yuba,CA

## Appendix B: Regional Population and Building Value Data

State	County Name	Population	Building Value (millions of dollars)		
			Residential	Non-Residential	Total
California	Alpine	1,204	721	139	861
	Amador	40,474	5,608	2,517	8,125
	Butte	211,632	25,875	16,639	42,514
	Calaveras	45,292	8,305	4,893	13,199
	El Dorado	191,185	34,907	9,704	44,611
	Lassen	32,730	4,033	2,008	6,042
	Mono	13,195	3,293	1,083	4,377
	Nevada	102,241	17,908	6,108	24,016
	Placer	404,739	69,985	24,193	94,179
	Plumas	19,790	6,128	2,276	8,405
	Sacramento	1,585,055	179,811	83,911	263,723
	San Joaquin	779,233	82,706	56,882	139,589
	Sierra	3,236	596	419	1,015
	Solano	453,491	55,802	26,393	82,195
	Sutter	99,633	10,618	6,448	17,066
	Tehama	65,829	7,705	5,113	12,818
	Tuolumne	55,620	8,964	3,507	12,471
Yolo	216,403	24,130	18,343	42,473	
Yuba	81,575	8,161	4,677	12,839	
<b>Total Region</b>		<b>4,402,557</b>	<b>555,256</b>	<b>275,253</b>	<b>830,518</b>

**Building Inspection Tagging (Counts)**

**Total Economic Loss**
**Total:**

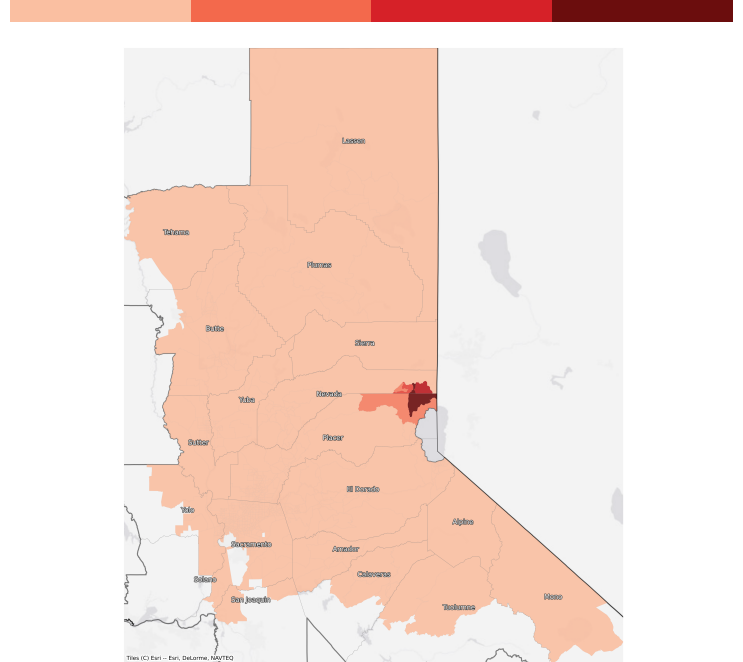
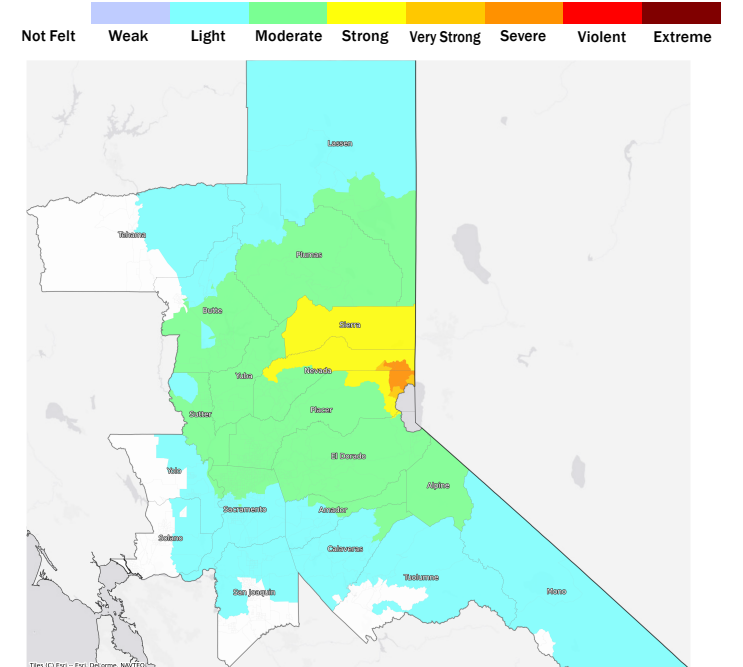
Top Counties	State	Total

**Injuries & Fatalities**
**Total Day:  
Total Night:**

Top Counties	State	Injuries (day/night)	Fatalities (day/night)

**Displaced Households & Short-Term Shelter Needs**
**Total Displaced:  
Total Needing Shelter:**

Top Counties	State	Displaced	Needing Shelter

**Economic Impacts by Census Tract**

**Ground Shaking**

**Debris**
**Total Tons:  
Total Truckloads:**

Type	Tons

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.

# Polaris

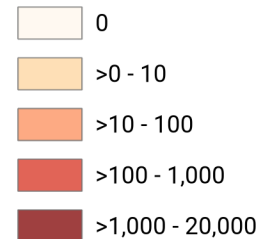
## Debris Generated by Census Tract



**Study Region:** Polaris  
**Scenario:** polaris2011cfmellbge\_m6p79\_se



**Debris Generated (in tons)**



# Polaris

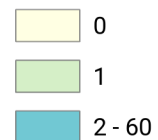
## Displaced Households by Census Tract



**Study Region:** Polaris  
**Scenario:** polaris2011cfmellbge\_m6p79\_se

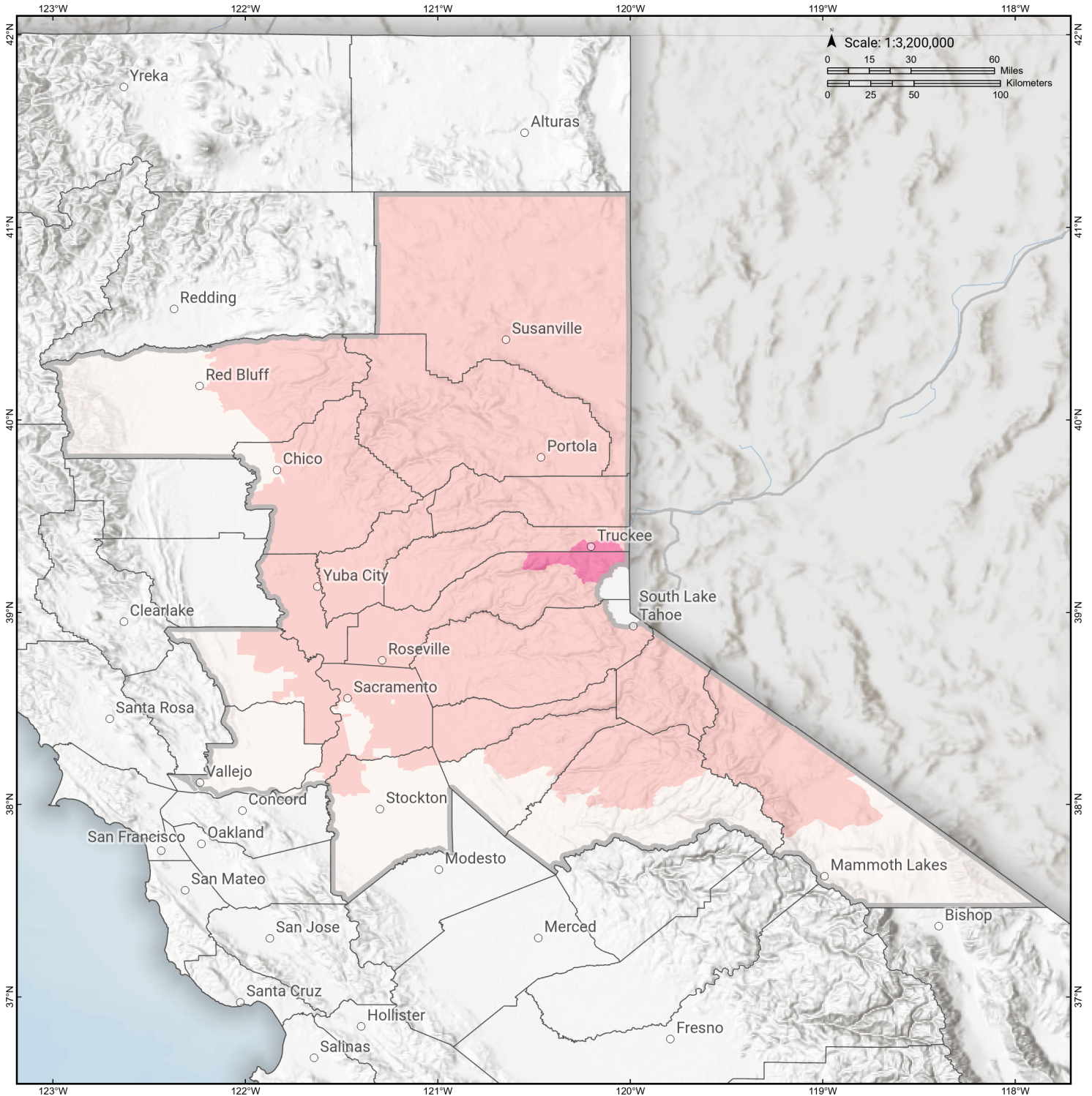


### Displaced Households



# Polaris

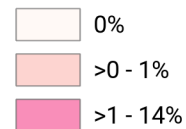
## Loss Ratio by Census Tract



**Study Region:** Polaris  
**Scenario:** polaris2011cfmellbge\_m6p79\_se

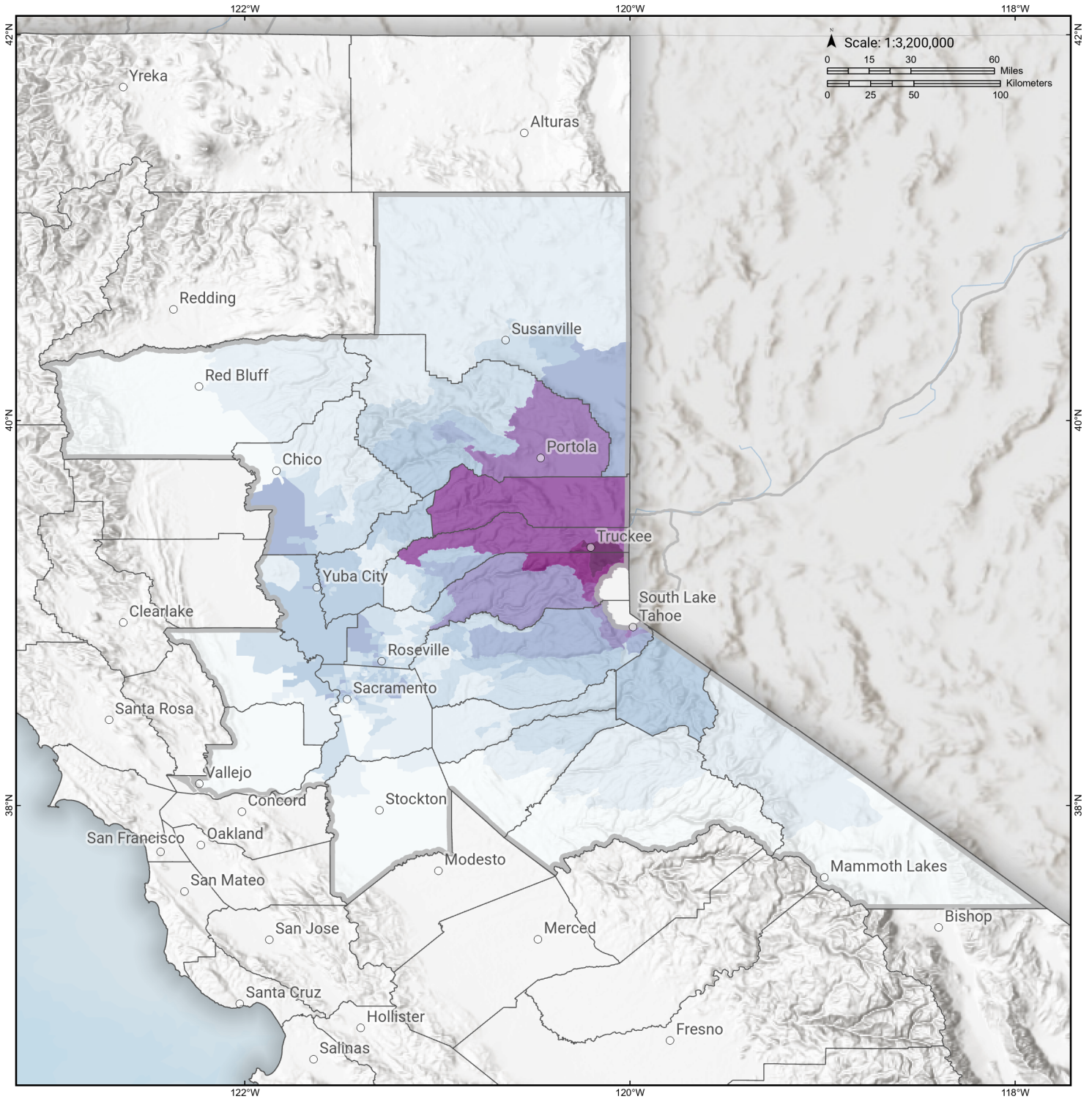


**Loss Ratio** (ratio of building related economic loss to exposed value of buildings)



# Polaris

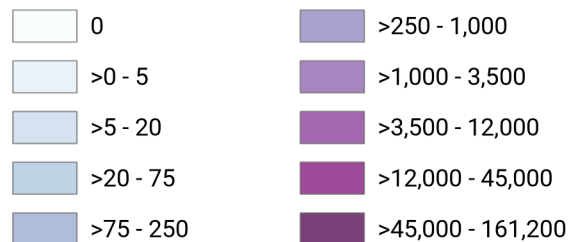
## Total Building Related Economic Loss by Census Tract



**Study Region:** Polaris  
**Scenario:** polaris2011cfmellbge\_m6p79\_se



### Economic Loss (in thousands of USD \$)



## Building Damage by Count by General Occupancy

May 06, 2024

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
<b>California</b>						
<b>Alpine</b>						
<i>Agriculture</i>	0	0	0	0	0	0
<i>Commercial</i>	48	0	0	0	0	48
<i>Education</i>	5	0	0	0	0	5
<i>Government</i>	4	0	0	0	0	4
<i>Industrial</i>	14	0	0	0	0	14
<i>Religion</i>	1	0	0	0	0	1
<i>Other Residential</i>	97	0	0	0	0	97
<i>Single Family</i>	842	0	0	0	0	842
<b>Amador</b>						
<i>Agriculture</i>	44	0	0	0	0	44
<i>Commercial</i>	1,368	0	0	0	0	1,368
<i>Education</i>	23	0	0	0	0	23
<i>Government</i>	32	0	0	0	0	32
<i>Industrial</i>	235	0	0	0	0	235
<i>Religion</i>	45	0	0	0	0	45
<i>Other Residential</i>	1,037	0	0	0	0	1,037
<i>Single Family</i>	14,962	0	0	0	0	14,962
<b>Butte</b>						

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
<i>Agriculture</i>	510	0	0	0	0	510
<i>Commercial</i>	6,384	1	0	0	0	6,385
<i>Education</i>	172	0	0	0	0	172
<i>Government</i>	147	0	0	0	0	147
<i>Industrial</i>	1,522	0	0	0	0	1,522
<i>Religion</i>	531	0	0	0	0	531
<i>Other Residential</i>	21,494	4	0	0	0	21,498
<i>Single Family</i>	50,283	0	0	0	0	50,283
<b>Calaveras</b>						
<i>Agriculture</i>	2,207	0	0	0	0	2,207
<i>Commercial</i>	1,413	0	0	0	0	1,413
<i>Education</i>	35	0	0	0	0	35
<i>Government</i>	84	0	0	0	0	84
<i>Industrial</i>	466	0	0	0	0	466
<i>Religion</i>	130	0	0	0	0	130
<i>Other Residential</i>	2,559	0	0	0	0	2,559
<i>Single Family</i>	22,148	0	0	0	0	22,148
<b>El Dorado</b>						
<i>Agriculture</i>	160	1	0	0	0	161
<i>Commercial</i>	4,743	23	2	0	0	4,768
<i>Education</i>	128	0	0	0	0	128
<i>Government</i>	99	1	0	0	0	100
<i>Industrial</i>	1,192	7	1	0	0	1,199
<i>Religion</i>	179	1	0	0	0	180
<i>Other Residential</i>	10,360	57	3	0	0	10,420

		# of Buildings					
		None	Slight	Moderate	Extensive	Complete	Total
<b>Lassen</b>	<i>Single Family</i>	71,157	266	1	0	0	71,424
	<i>Agriculture</i>	37	0	0	0	0	37
	<i>Commercial</i>	913	0	0	0	0	913
	<i>Education</i>	40	0	0	0	0	40
	<i>Government</i>	22	0	0	0	0	22
	<i>Industrial</i>	140	0	0	0	0	140
	<i>Religion</i>	71	0	0	0	0	71
	<i>Other Residential</i>	2,622	5	0	0	0	2,627
<b>Mono</b>	<i>Single Family</i>	9,561	1	0	0	0	9,562
	<i>Agriculture</i>	145	0	0	0	0	145
	<i>Commercial</i>	654	0	0	0	0	654
	<i>Education</i>	21	0	0	0	0	21
	<i>Government</i>	18	0	0	0	0	18
	<i>Industrial</i>	108	0	0	0	0	108
	<i>Religion</i>	32	0	0	0	0	32
	<i>Other Residential</i>	1,759	0	0	0	0	1,759
<b>Nevada</b>	<i>Single Family</i>	7,704	0	0	0	0	7,704
	<i>Agriculture</i>	115	7	7	2	1	132
	<i>Commercial</i>	2,279	246	245	60	5	2,835
	<i>Education</i>	96	7	4	1	0	108
	<i>Government</i>	48	5	6	1	0	60
	<i>Industrial</i>	893	120	119	28	2	1,161

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
<i>Religion</i>	167	10	9	2	0	189
<i>Other Residential</i>	5,698	286	238	148	13	6,384
<i>Single Family</i>	35,018	6,515	1,725	22	0	43,280
<b>Placer</b>						
<i>Agriculture</i>	249	6	2	0	0	258
<i>Commercial</i>	8,201	225	104	9	0	8,538
<i>Education</i>	230	1	0	0	0	231
<i>Government</i>	319	38	18	1	0	377
<i>Industrial</i>	2,586	81	34	2	0	2,703
<i>Religion</i>	367	10	4	0	0	382
<i>Other Residential</i>	14,417	329	88	8	0	14,843
<i>Single Family</i>	129,563	4,609	544	2	0	134,719
<b>Plumas</b>						
<i>Agriculture</i>	83	0	0	0	0	84
<i>Commercial</i>	1,209	6	0	0	0	1,215
<i>Education</i>	26	0	0	0	0	26
<i>Government</i>	45	0	0	0	0	45
<i>Industrial</i>	183	1	0	0	0	184
<i>Religion</i>	30	0	0	0	0	30
<i>Other Residential</i>	5,001	29	2	0	0	5,032
<i>Single Family</i>	9,861	16	0	0	0	9,877
<b>Sacramento</b>						
<i>Agriculture</i>	621	0	0	0	0	621
<i>Commercial</i>	26,290	4	0	0	0	26,295
<i>Education</i>	829	0	0	0	0	829

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
<i>Government</i>	619	0	0	0	0	619
<i>Industrial</i>	6,755	1	0	0	0	6,756
<i>Religion</i>	1,702	0	0	0	0	1,702
<i>Other Residential</i>	56,409	4	0	0	0	56,413
<i>Single Family</i>	386,838	2	0	0	0	386,840
<b>San Joaquin</b>						
<i>Agriculture</i>	753	0	0	0	0	753
<i>Commercial</i>	12,864	0	0	0	0	12,864
<i>Education</i>	395	0	0	0	0	395
<i>Government</i>	304	0	0	0	0	304
<i>Industrial</i>	4,928	0	0	0	0	4,928
<i>Religion</i>	877	0	0	0	0	877
<i>Other Residential</i>	21,805	0	0	0	0	21,805
<i>Single Family</i>	188,922	0	0	0	0	188,922
<b>Sierra</b>						
<i>Agriculture</i>	6	1	0	0	0	7
<i>Commercial</i>	125	14	2	0	0	141
<i>Education</i>	13	1	0	0	0	14
<i>Government</i>	15	1	0	0	0	16
<i>Industrial</i>	58	7	1	0	0	66
<i>Religion</i>	11	1	0	0	0	12
<i>Other Residential</i>	133	18	2	0	0	153
<i>Single Family</i>	1,701	155	2	0	0	1,858
<b>Solano</b>						
<i>Agriculture</i>	245	0	0	0	0	245

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
<i>Commercial</i>	7,268	0	0	0	0	7,268
<i>Education</i>	225	0	0	0	0	225
<i>Government</i>	152	0	0	0	0	152
<i>Industrial</i>	2,101	0	0	0	0	2,101
<i>Religion</i>	454	0	0	0	0	454
<i>Other Residential</i>	12,317	0	0	0	0	12,317
<i>Single Family</i>	120,968	0	0	0	0	120,968
<b>Sutter</b>						
<i>Agriculture</i>	1,124	1	0	0	0	1,125
<i>Commercial</i>	2,051	1	0	0	0	2,052
<i>Education</i>	62	0	0	0	0	62
<i>Government</i>	77	0	0	0	0	77
<i>Industrial</i>	636	0	0	0	0	636
<i>Religion</i>	154	0	0	0	0	154
<i>Other Residential</i>	3,111	2	0	0	0	3,113
<i>Single Family</i>	24,512	0	0	0	0	24,512
<b>Tehama</b>						
<i>Agriculture</i>	299	0	0	0	0	299
<i>Commercial</i>	1,270	0	0	0	0	1,270
<i>Education</i>	57	0	0	0	0	57
<i>Government</i>	50	0	0	0	0	50
<i>Industrial</i>	552	0	0	0	0	552
<i>Religion</i>	110	0	0	0	0	110
<i>Other Residential</i>	3,991	0	0	0	0	3,991

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
<i>Single Family</i>	21,222	0	0	0	0	21,222
<b>Tuolumne</b>						
<i>Agriculture</i>	82	0	0	0	0	82
<i>Commercial</i>	1,576	0	0	0	0	1,576
<i>Education</i>	57	0	0	0	0	57
<i>Government</i>	143	0	0	0	0	143
<i>Industrial</i>	383	0	0	0	0	383
<i>Religion</i>	121	0	0	0	0	121
<i>Other Residential</i>	4,962	0	0	0	0	4,962
<i>Single Family</i>	21,645	0	0	0	0	21,645
<b>Yolo</b>						
<i>Agriculture</i>	281	0	0	0	0	281
<i>Commercial</i>	4,225	0	0	0	0	4,225
<i>Education</i>	131	0	0	0	0	131
<i>Government</i>	111	0	0	0	0	111
<i>Industrial</i>	1,117	0	0	0	0	1,117
<i>Religion</i>	242	0	0	0	0	242
<i>Other Residential</i>	9,861	0	0	0	0	9,861
<i>Single Family</i>	42,589	0	0	0	0	42,589
<b>Yuba</b>						
<i>Agriculture</i>	92	0	0	0	0	92
<i>Commercial</i>	1,198	1	0	0	0	1,199
<i>Education</i>	54	0	0	0	0	54
<i>Government</i>	591	0	0	0	0	591
<i>Industrial</i>	404	0	0	0	0	404

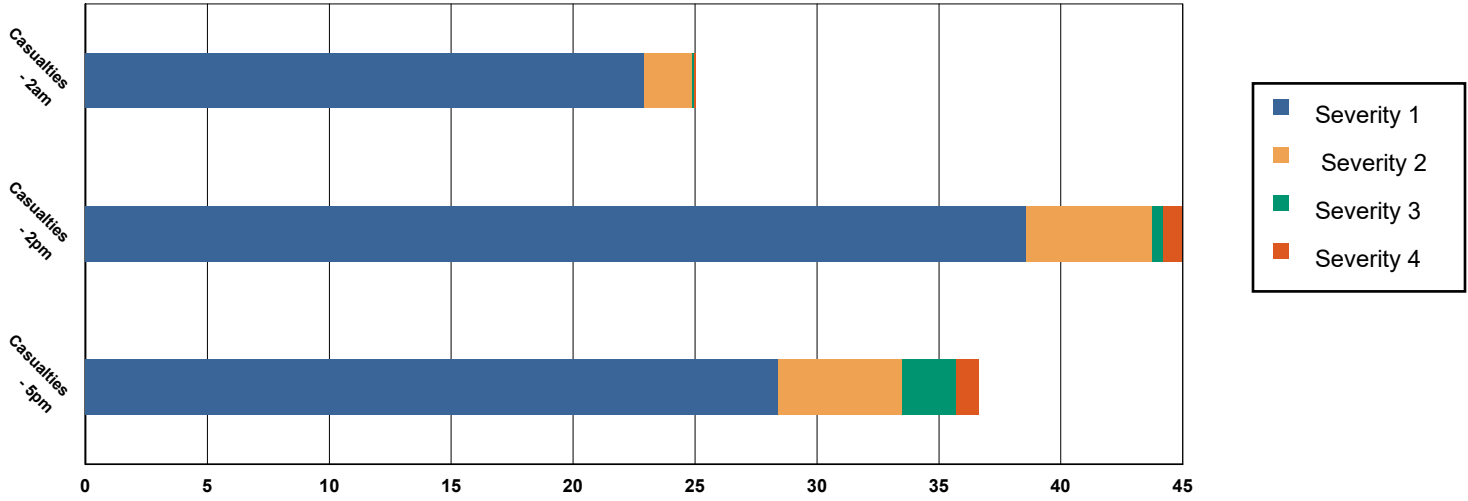
	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
<i>Religion</i>	98	0	0	0	0	98
<i>Other Residential</i>	7,017	4	0	0	0	7,021
<i>Single Family</i>	18,867	0	0	0	0	18,867
<b>Total</b>	<b>1,489,218</b>	<b>13,132</b>	<b>3,168</b>	<b>287</b>	<b>22</b>	<b>1,505,827</b>
<b>Region Total</b>	<b>1,489,218</b>	<b>13,132</b>	<b>3,168</b>	<b>287</b>	<b>22</b>	<b>1,505,827</b>

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

### Casualties Summary Report

May 06, 2024

### Region Total Casualties



### Injury Severity Level

Severity 1	Severity 2	Severity 3	Severity 4	Total
------------	------------	------------	------------	-------

#### California

##### Alpine

##### Casualties - 2am

	Severity 1	Severity 2	Severity 3	Severity 4	Total
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

	Severity 1	Severity 2	Severity 3	Severity 4	Total
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				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
<b>California</b>					
<b>Alpine</b>					
<b>Total Casualties - 2pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 5pm</b>					
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<b>Total Casualties - 5pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Amador</b>					
<b>Casualties - 2am</b>					
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<b>Total Casualties - 2am</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 2pm</b>					
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<b>Total Casualties - 2pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 5pm</b>					
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<b>Total Casualties - 5pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Butte</b>					
<b>Casualties - 2am</b>					
<i>Commuting</i>	0	0	0	0	0

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
<b>California</b>					
<b>Butte</b>					
<b>Casualties - 2am</b>					
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
<b>Total Casualties - 2am</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 2pm</b>					
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
<b>Total Casualties - 2pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 5pm</b>					
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
<b>Total Casualties - 5pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Calaveras</b>					
<b>Casualties - 2am</b>					
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
<b>Total Casualties - 2am</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 2pm</b>					
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				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
<b>California</b>					
<b>Calaveras</b>					
<b>Casualties - 2pm</b>					
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
<b>Total Casualties - 2pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 5pm</b>					
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
<b>Total Casualties - 5pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>El Dorado</b>					
<b>Casualties - 2am</b>					
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
<b>Total Casualties - 2am</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 2pm</b>					
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
<b>Total Casualties - 2pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 5pm</b>					
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
<b>Total Casualties - 5pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

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

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
<b>California</b>					
<b>Mono</b>					
<b>Casualties - 2pm</b>					
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<b>Total Casualties - 2pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 5pm</b>					
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<b>Total Casualties - 5pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Nevada</b>					
<b>Casualties - 2am</b>					
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	1	0	0	0	1
<i>Other-Residential</i>	5	1	0	0	6
<i>Single Family</i>	11	1	0	0	12
<b>Total Casualties - 2am</b>	<b>17</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>19</b>
<b>Casualties - 2pm</b>					
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	17	3	0	1	21
<i>Educational</i>	3	0	0	0	4
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	4	1	0	0	5
<i>Other-Residential</i>	1	0	0	0	2
<i>Single Family</i>	3	0	0	0	3
<b>Total Casualties - 2pm</b>	<b>29</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>34</b>
<b>Casualties - 5pm</b>					
<i>Commuting</i>	1	1	2	0	4
<i>Commercial</i>	12	2	0	0	15
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	3	0	0	0	3
<i>Other-Residential</i>	2	0	0	0	2
<i>Single Family</i>	4	0	0	0	4

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
<b>California</b>					
<b>Nevada</b>					
<b>Total Casualties - 5pm</b>	<b>22</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>29</b>
<b>Placer</b>					
<b>Casualties - 2am</b>					
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	3	0	0	0	4
<b>Total Casualties - 2am</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>
<b>Casualties - 2pm</b>					
Commuting	0	0	0	0	0
Commercial	6	1	0	0	7
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	1	0	0	0	1
Other-Residential	1	0	0	0	1
Single Family	1	0	0	0	1
<b>Total Casualties - 2pm</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>10</b>
<b>Casualties - 5pm</b>					
Commuting	0	0	0	0	0
Commercial	4	0	0	0	4
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	1
Other-Residential	1	0	0	0	1
Single Family	1	0	0	0	1
<b>Total Casualties - 5pm</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>7</b>
<b>Plumas</b>					
<b>Casualties - 2am</b>					
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
<b>Total Casualties - 2am</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 2pm</b>					
Commuting	0	0	0	0	0

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

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
<b>California</b>					
<b>Sacramento</b>					
<b>Casualties - 5pm</b>					
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
<b>Total Casualties - 5pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>San Joaquin</b>					
<b>Casualties - 2am</b>					
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
<b>Total Casualties - 2am</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 2pm</b>					
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
<b>Total Casualties - 2pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 5pm</b>					
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
<b>Total Casualties - 5pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Sierra</b>					
<b>Casualties - 2am</b>					
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				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
<b>California</b>					
<b>Sierra</b>					
<b>Total Casualties - 2am</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 2pm</b>					
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<b>Total Casualties - 2pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 5pm</b>					
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<b>Total Casualties - 5pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Solano</b>					
<b>Casualties - 2am</b>					
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<b>Total Casualties - 2am</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 2pm</b>					
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<b>Total Casualties - 2pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 5pm</b>					
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0

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

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
<b>California</b>					
<b>Tehama</b>					
<b>Casualties - 2am</b>					
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
<b>Total Casualties - 2am</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 2pm</b>					
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
<b>Total Casualties - 2pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 5pm</b>					
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
<b>Total Casualties - 5pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Tuolumne</b>					
<b>Casualties - 2am</b>					
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
<b>Total Casualties - 2am</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Casualties - 2pm</b>					
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
<b>Total Casualties - 2pm</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

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

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

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

## Debris Summary Report

May 06, 2024

All values are in thousands of tons.

	Brick, Wood & Others	Concrete & Steel	Total
<b>California</b>			
Alpine	0	0	0
Amador	0	0	0
Butte	0	0	0
Calaveras	0	0	0
El Dorado	0	0	1
Lassen	0	0	0
Mono	0	0	0
Nevada	23	25	48
Placer	11	10	20
Plumas	0	0	0
Sacramento	0	0	0
San Joaquin	0	0	0
Sierra	0	0	0
Solano	0	0	0
Sutter	0	0	0
Tehama	0	0	0
Tuolumne	0	0	0
Yolo	0	0	0
Yuba	0	0	0

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	Brick, Wood & Others	Concrete & Steel	Total
<b>Total</b>	34	36	70
<b>Region Total</b>	34	36	70

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*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.*

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## Direct Economic Losses For Buildings

May 6, 2024

All values are in thousands of dollars

	Capital Stock Losses				Loss Ratio %	Income Losses				Total Loss
	Cost Structural Damage	Cost Non-struct. Damage	Cost Contents Damage	Inventory Loss		Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	
<b>California</b>										
Alpine	0	14	7	0	0.00	0	0	0	0	22
Amador	0	21	15	1	0.00	0	0	0	0	38
Butte	24	380	268	46	0.00	3	2	3	4	729
Calaveras	0	11	9	2	0.00	0	0	0	0	23
El Dorado	708	10,367	5,049	253	0.02	79	129	132	176	16,894
Lassen	9	189	102	7	0.00	1	1	1	3	314
Mono	0	1	0	0	0.00	0	0	0	0	1
Nevada	55,094	287,679	127,867	6,586	1.43	27,419	11,332	13,080	13,008	542,066
Placer	26,974	187,626	83,701	3,064	0.23	9,884	6,273	8,838	10,782	337,144

	Capital Stock Losses					Income Losses				Total Loss
	Cost Structural Damage	Cost Non-struct. Damage	Cost Contents Damage	Inventory Loss	Loss Ratio %	Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	
Plumas	113	2,014	1,051	57	0.03	21	33	27	37	3,353
Sacramento	62	2,971	1,981	183	0.00	6	16	25	25	5,271
San Joaquin	1	3	1	0	0.00	0	0	0	0	5
Sierra	503	5,621	3,215	268	0.60	101	110	110	92	10,020
Solano	0	0	0	0	0.00	0	0	0	0	0
Sutter	14	433	285	63	0.00	1	1	1	2	800
Tehama	0	1	1	0	0.00	0	0	0	0	1
Tuolumne	0	1	1	0	0.00	0	0	0	0	1
Yolo	3	194	137	23	0.00	0	0	0	1	359
Yuba	8	324	205	24	0.00	1	2	2	3	570
<b>Total</b>	<b>83,514</b>	<b>497,852</b>	<b>223,896</b>	<b>10,579</b>	<b>0.12</b>	<b>37,516</b>	<b>17,900</b>	<b>22,220</b>	<b>24,133</b>	<b>917,610</b>
<b>Region Total</b>	<b>83,514</b>	<b>497,852</b>	<b>223,896</b>	<b>10,579</b>	<b>0.12</b>	<b>37,516</b>	<b>17,900</b>	<b>22,220</b>	<b>24,133</b>	<b>917,610</b>

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

## Direct Economic Loss For Transportation

May 06, 2024

All values are in thousands of dollars

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
<b>California</b>								
<b>Alpine</b>								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	51	51
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>51</b>	<b>51</b>
<b>Amador</b>								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	51	51
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>51</b>	<b>51</b>
<b>Butte</b>								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	102	102

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102</b>	<b>103</b>
<b>Calaveras</b>								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	11	11
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>11</b>
<b>El Dorado</b>								
Segments	0	0	0					0
Bridges	5	0	0					5
Tunnels	0	0	0					0
Facilities		0	0	202	0	0	448	651
<b>Total</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>202</b>	<b>0</b>	<b>0</b>	<b>448</b>	<b>656</b>
<b>Lassen</b>								
Segments	0	0	0					0
Bridges	1	4	0					5
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	204	204
<b>Total</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>204</b>	<b>209</b>
<b>Mono</b>								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	153	153

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>153</b>	<b>153</b>
<b>Nevada</b>								
Segments	0	0	0					0
Bridges	11,201	1,102	0					12,303
Tunnels	76	0	0					76
Facilities		1,109	0	0	0	0	2,438	3,546
<b>Total</b>	<b>11,277</b>	<b>2,211</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,438</b>	<b>15,926</b>
<b>Placer</b>								
Segments	0	0	0					0
Bridges	167	54	0					220
Tunnels	0	0	0					0
Facilities		103	0	21	0	0	371	494
<b>Total</b>	<b>167</b>	<b>156</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>371</b>	<b>715</b>
<b>Plumas</b>								
Segments	0	0	0					0
Bridges	66	43	0					109
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	706	706
<b>Total</b>	<b>66</b>	<b>43</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>706</b>	<b>815</b>
<b>Sacramento</b>								
Segments	0	0	0					0
Bridges	5	0	0					5
Tunnels	0	0	0					0
Facilities		26	2,536	43	131	1	4,038	6,774

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
<b>Total</b>	<b>5</b>	<b>26</b>	<b>2,536</b>	<b>43</b>	<b>131</b>	<b>1</b>	<b>4,038</b>	<b>6,779</b>
<b>San Joaquin</b>								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		3	0	0	20	3	0	26
<b>Total</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>3</b>	<b>0</b>	<b>26</b>
<b>Sierra</b>								
Segments	0	0	0					0
Bridges	344	14	0					358
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	1,199	1,199
<b>Total</b>	<b>344</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,199</b>	<b>1,557</b>
<b>Solano</b>								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	2	45	4	6	57
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>45</b>	<b>4</b>	<b>6</b>	<b>57</b>
<b>Sutter</b>								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	129	129

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>129</b>	<b>129</b>
<b>Tehama</b>								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Tuolumne</b>								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	0	0	0	6	6
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>6</b>
<b>Yolo</b>								
Segments	0	0	0					0
Bridges	5	0	0					5
Tunnels	0	0	0					0
Facilities		60	0	0	559	0	57	675
<b>Total</b>	<b>5</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>559</b>	<b>0</b>	<b>57</b>	<b>680</b>
<b>Yuba</b>								
Segments	0	0	0					0
Bridges	0	0	0					0
Tunnels	0	0	0					0
Facilities		0	0	22	0	0	102	124

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
<b>Total</b>	0	0	0	22	0	0	102	124
<b>Total</b>	11,871	2,517	2,536	290	755	9	10,071	28,048
<b>Region Total</b>	11,871	2,517	2,536	290	755	9	10,071	28,048

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

## Direct Economic Loss For Utilities

May 06, 2024

All values are in thousands of dollars

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
<b>California</b>							
<b>Alpine</b>							
<i>Facilities</i>	0	123	0	0	0	0	123
<i>Pipelines</i>	5	2	0	0			7
<b>Total</b>	5	125	0	0	0	0	130
<b>Amador</b>							
<i>Facilities</i>	0	123	0	0	3,190	0	3,313
<i>Pipelines</i>	11	6	0	0			17
<b>Total</b>	11	129	0	0	3,190	0	3,330
<b>Butte</b>							
<i>Facilities</i>	28	369	0	0	41,564	1	41,963
<i>Pipelines</i>	35	18	0	0			53
<b>Total</b>	63	386	0	0	41,564	1	42,016
<b>Calaveras</b>							
<i>Facilities</i>	1	8	0	0	623	0	632

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
<i>Pipelines</i>	16	8	0	0			24
<b>Total</b>	17	16	0	0	623	0	656
<b>El Dorado</b>							
<i>Facilities</i>	28	492	0	0	57,085	6	57,611
<i>Pipelines</i>	79	40	0	0			118
<b>Total</b>	107	531	0	0	57,085	6	57,729
<b>Lassen</b>							
<i>Facilities</i>	0	123	0	0	739	1	862
<i>Pipelines</i>	62	31	0	0			93
<b>Total</b>	62	154	0	0	739	1	955
<b>Mono</b>							
<i>Facilities</i>	0	0	0	0	0	0	0
<i>Pipelines</i>	12	6	0	0			18
<b>Total</b>	12	6	0	0	0	0	18
<b>Nevada</b>							
<i>Facilities</i>	0	9,042	0	0	10,200	1	19,243
<i>Pipelines</i>	1,064	534	0	0			1,598
<b>Total</b>	1,064	9,576	0	0	10,200	1	20,841
<b>Placer</b>							
<i>Facilities</i>	0	1,229	0	0	68,812	1	70,043
<i>Pipelines</i>	442	222	0	0			665

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
<b>Total</b>	442	1,452	0	0	68,812	1	70,708
<b>Plumas</b>							
<i>Facilities</i>	348	6,185	0	0	22,497	1	29,031
<i>Pipelines</i>	112	56	0	0			168
<b>Total</b>	460	6,241	0	0	22,497	1	29,199
<b>Sacramento</b>							
<i>Facilities</i>	0	387	0	0	12,320	5	12,711
<i>Pipelines</i>	100	50	0	0			151
<b>Total</b>	100	437	0	0	12,320	5	12,862
<b>San Joaquin</b>							
<i>Facilities</i>	1	3	0	0	146	0	149
<i>Pipelines</i>	24	12	0	0			36
<b>Total</b>	25	15	0	0	146	0	185
<b>Sierra</b>							
<i>Facilities</i>	0	0	0	0	46,814	0	46,814
<i>Pipelines</i>	380	191	0	0			571
<b>Total</b>	380	191	0	0	46,814	0	47,385
<b>Solano</b>							
<i>Facilities</i>	0	5	0	0	138	0	143
<i>Pipelines</i>	14	7	0	0			21
<b>Total</b>	14	12	0	0	138	0	164

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
<b>Sutter</b>							
<i>Facilities</i>	0	246	0	0	6,808	1	7,054
<i>Pipelines</i>	28	14	0	0			43
<b>Total</b>	28	260	0	0	6,808	1	7,097
<b>Tehama</b>							
<i>Facilities</i>	0	3	0	0	0	0	3
<i>Pipelines</i>	8	4	0	0			12
<b>Total</b>	8	7	0	0	0	0	15
<b>Tuolumne</b>							
<i>Facilities</i>	0	0	0	0	236	0	236
<i>Pipelines</i>	9	4	0	0			13
<b>Total</b>	9	4	0	0	236	0	250
<b>Yolo</b>							
<i>Facilities</i>	0	131	0	0	8	0	138
<i>Pipelines</i>	27	14	0	0			41
<b>Total</b>	27	144	0	0	8	0	179
<b>Yuba</b>							
<i>Facilities</i>	0	492	0	0	15,532	0	16,024
<i>Pipelines</i>	30	15	0	0			44
<b>Total</b>	30	507	0	0	15,532	0	16,069
<b>Total</b>	<b>2,864</b>	<b>20,194</b>	<b>0</b>	<b>0</b>	<b>286,712</b>	<b>15</b>	<b>309,786</b>

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	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
<b>Region Total</b>	2,864	20,194	0	0	286,712	15	309,786

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*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.*

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## Hazus Quick Assessment Report

### Estimated Economic Loss (\$ Billions)

Category	Description	Range
General Building Stock	Building Damage	0.30 - 1.20
	Building Contents	0.00 - 0.10
	Business Interruption	0.10 - 0.20
Infrastructure	Lifelines Damage	
<b>Total</b>		0.50 - 1.80

### Preliminary Damage Assessment (PDA) Estimates

Description	Residential	Commercial	Other	Total
Affected	12,300	520	300	13,120
Minor	2,600	350	200	3,150
Major	180	70	40	290
Destroyed	10	< 10	< 10	10
<b>Total</b>	15,090	940	540	16,570

### Estimated Casualties : Night Time

Severity Level	Description	# Persons
Level 1	Medical Aid	10 - 50
Level 2	Hospital Care	< 10
Level 3	Life-threatening	< 10
Level 4	Fatalities	< 10

### Estimated Shelter Needs

Type	Households	People
Displaced Households	40 - 170	100 - 425
Public Shelter	10	40

Comments :

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

**Disclaimer:**

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

### Earthquake Information

Location :

Origin Time:

Magnitude : 6.79

Epicenter Latitude/Longitude :  
/

Depth & Type : /U

Name :  
NA

Ground Motion /Attenuation :

Maximum PGA: 1.00

Information Sources:

Comments :

### Population and Building Exposure

Population: 4,402,557

### Building Exposure : (\$ Millions)

Residential	555,265
Commercial	149,630
Other	125,630
<b>Total</b>	<b>830,525</b>

Counties : See Appendix

Major Metro Area :

## Hazus Quick Assessment Report

### Estimated Economic Loss (\$ Billions)

Category	Description	Range
General Building Stock	Building Damage	0.30 - 1.20
	Building Contents	0.00 - 0.10
	Business Interruption	0.10 - 0.20
Infrastructure	Lifelines Damage	
<b>Total</b>		0.50 - 1.80

### Preliminary Damage Assessment (PDA) Estimates

Description	Residential	Commercial	Other	Total
Affected	12,300	520	300	13,120
Minor	2,600	350	200	3,150
Major	180	70	40	290
Destroyed	10	< 10	< 10	10
<b>Total</b>	15,090	940	540	16,570

### Estimated Casualties : Day Time

Severity Level	Description	# Persons
Level 1	Medical Aid	20 - 80
Level 2	Hospital Care	< 10
Level 3	Life-threatening	< 10
Level 4	Fatalities	< 10

### Estimated Shelter Needs

Type	Households	People
Displaced Households	40 - 170	100 - 425
Public Shelter	10	40

### Earthquake Information

Location :

Origin Time:

Magnitude : 6.79

Epicenter Latitude/Longitude :  
/

Depth & Type : /U

Name :  
NA

Ground Motion /Attenuation :

Maximum PGA: 1.00

Information Sources:

Comments :

### Population and Building Exposure

Population: 4,402,557

### Building Exposure : (\$ Millions)

Residential	555,265
Commercial	149,630
Other	125,630
<b>Total</b>	<b>830,525</b>

Counties : See Appendix

Major Metro Area :

Comments :

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## Hazus Quick Assessment Report

### Estimated Economic Loss (\$ Billions)

Category	Description	Range
General Building Stock	Building Damage	0.30 - 1.20
	Building Contents	0.00 - 0.10
	Business Interruption	0.10 - 0.20
Infrastructure	Lifelines Damage	
<b>Total</b>		0.50 - 1.80

### Preliminary Damage Assessment (PDA) Estimates

Description	Residential	Commercial	Other	Total
Affected	12,300	520	300	13,120
Minor	2,600	350	200	3,150
Major	180	70	40	290
Destroyed	10	< 10	< 10	10
<b>Total</b>	15,090	940	540	16,570

### Estimated Casualties : Commute Time

Severity Level	Description	# Persons
Level 1	Medical Aid	10 - 60
Level 2	Hospital Care	< 10
Level 3	Life-threatening	< 10
Level 4	Fatalities	< 10

### Estimated Shelter Needs

Type	Households	People
Displaced Households	40 - 170	100 - 425
Public Shelter	10	40

### Earthquake Information

Location :

Origin Time:

Magnitude : 6.79

Epicenter Latitude/Longitude :  
/

Depth & Type : /U

Name :  
NA

Ground Motion /Attenuation :

Maximum PGA: 1.00

Information Sources:

Comments :

### Population and Building Exposure

Population: 4,402,557

### Building Exposure : (\$ Millions)

Residential	555,265
Commercial	149,630
Other	125,630
<b>Total</b>	<b>830,525</b>

Counties : See Appendix

Major Metro Area :

Comments :

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

#### Disclaimer:

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## Shelter Summary Report

May 06, 2024

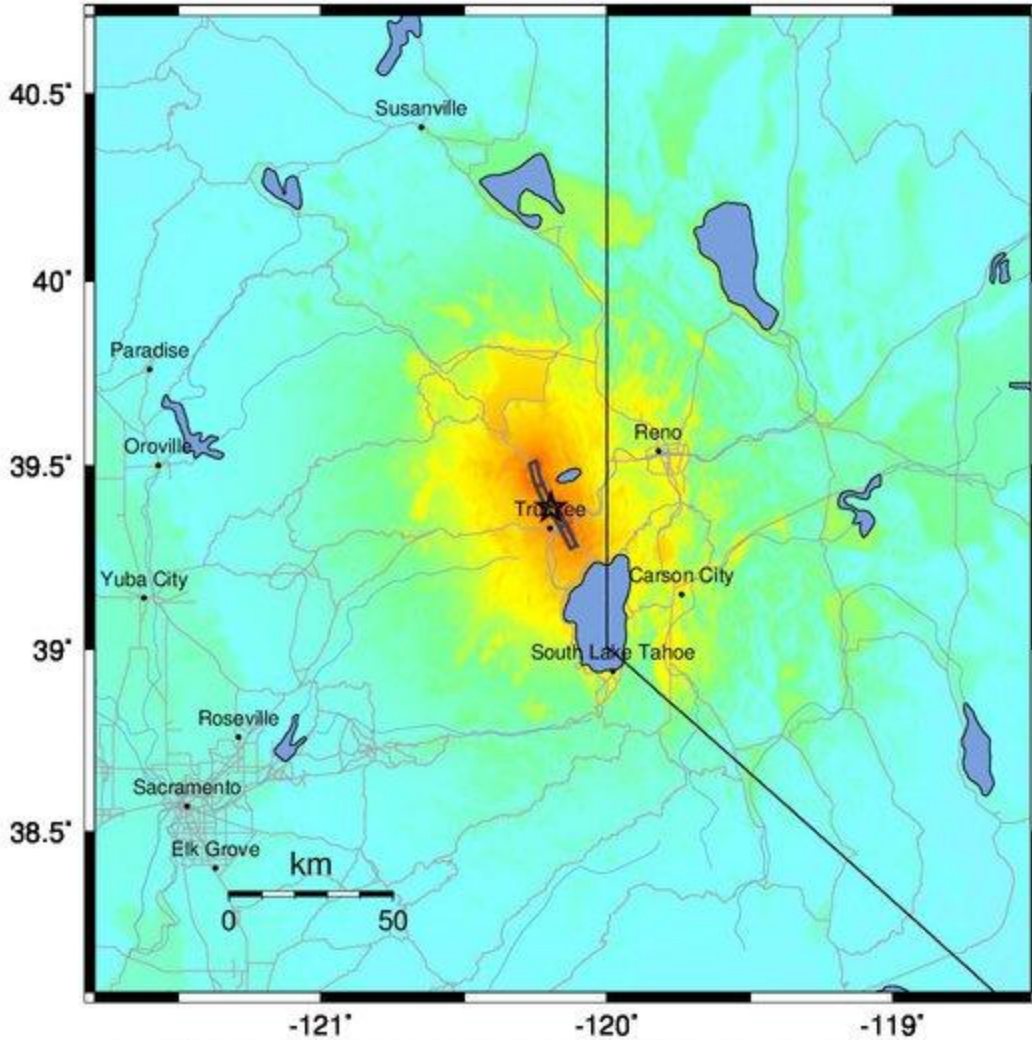
	# of Displaced Households	# of People Needing Short Term Shelter
<b>California</b>		
Alpine	0	0
Amador	0	0
Butte	0	0
Calaveras	0	0
El Dorado	0	0
Lassen	0	0
Mono	0	0
Nevada	71	29
Placer	16	6
Plumas	0	0
Sacramento	0	0
San Joaquin	0	0
Sierra	0	0
Solano	0	0
Sutter	0	0
Tehama	0	0
Tuolumne	0	0
Yolo	0	0
Yuba	0	0
<b>Total</b>	<b>87</b>	<b>35</b>
<b>Region Total</b>	<b>87</b>	<b>35</b>

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 Polaris - Median ground motions Scenario

Scenario Date: May 16, 2017 08:32:03 AM MDT M 6.8 N39.39 W120.20 Depth: 9.6km



PLANNING SCENARIO ONLY -- Map Version 10 Processed 2017-05-17 12:21:22 AM MDT

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

Scale based upon Worden et al. (2012)