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## Hazus: Earthquake Global Risk Report

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**Region Name:** ElsinoreCMJTsGIW

**Earthquake Scenario:** elsinorecmjtsgiwshaw\_m7p77\_se

**Print Date:** May 22, 2024

**Disclaimer:**

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

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

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## General Description of the Region

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

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

California

Note:

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

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

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

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

## Building and Lifeline Inventory

### Building Inventory

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

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

### Critical Facility Inventory

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

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

### Transportation and Utility Lifeline Inventory

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

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

**Table 1: Transportation System Lifeline Inventory**

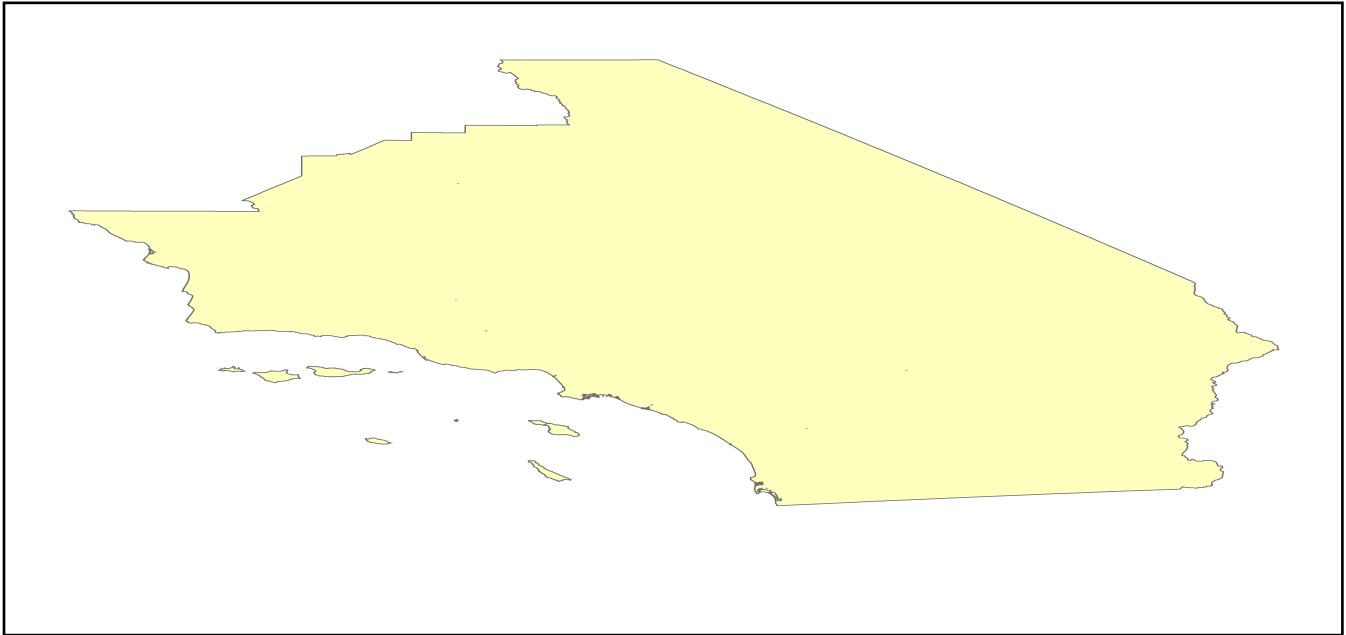
| System            | Component       | # Locations/<br># Segments | Replacement value<br>(millions of dollars) |
|-------------------|-----------------|----------------------------|--|
| <b>Highway</b>    | Bridges         | 12,131                     | 68183.0231                                 |
|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

**Table 2: Utility System Lifeline Inventory**

| System                  | Component          | # Locations / Segments | Replacement value (millions of dollars) |
|-------------------------|--------------------|------------------------|---|
| <b>Potable Water</b>    | Distribution Lines | NA                     | 5307.8476                               |
|                         | Facilities         | 53                     | 2082.5820                               |
|                         | Pipelines          | 0                      | 0.0000                                  |
|                         |                    | <b>Subtotal</b>        | <b>7390.4296</b>                        |
| <b>Waste Water</b>      | Distribution Lines | NA                     | 3184.7085                               |
|                         | Facilities         | 136                    | 23385.4448                              |
|                         | Pipelines          | 0                      | 0.0000                                  |
|                         |                    | <b>Subtotal</b>        | <b>26570.1533</b>                       |
| <b>Natural Gas</b>      | Distribution Lines | NA                     | 2123.1390                               |
|                         | Facilities         | 44                     | 1599.3257                               |
|                         | Pipelines          | 362                    | 19300.5635                              |
|                         |                    | <b>Subtotal</b>        | <b>23023.0282</b>                       |
| <b>Oil Systems</b>      | Facilities         | 68                     | 8.0240                                  |
|                         | Pipelines          | 0                      | 0.0000                                  |
|                         |                    | <b>Subtotal</b>        | <b>8.0240</b>                           |
| <b>Electrical Power</b> | Facilities         | 635                    | 137018.3076                             |
|                         |                    | <b>Subtotal</b>        | <b>137018.3076</b>                      |
| <b>Communication</b>    | Facilities         | 476                    | 56.1680                                 |
|                         |                    | <b>Subtotal</b>        | <b>56.1680</b>                          |
|                         | <b>Total</b>       |                        | <b>194,066.10</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>                 | elsinorecmjtsgiwshaw_m7p77_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>          | 7.77                          |
| <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 463,730 buildings will be at least moderately damaged. This is over 7.00 % of the buildings in the region. There are an estimated 21,226 buildings that will be damaged beyond repair. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the Hazus technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 below summarizes the expected damage by general building type.

### Damage Categories by General Occupancy Type

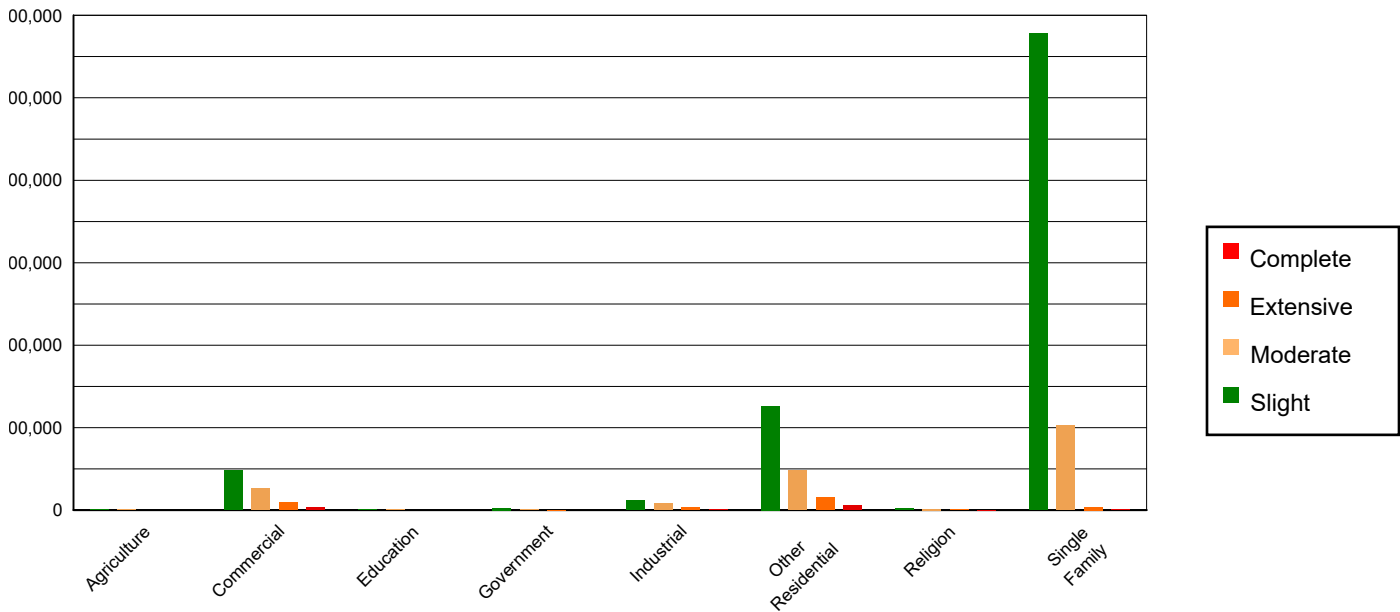


Table 3: Expected Building Damage by Occupancy

|                          | None             |       | Slight           |       | Moderate       |       | Extensive     |       | Complete      |       |
|--------------------------|------------------|-------|------------------|-------|----------------|-------|---------------|-------|---------------|-------|
|                          | Count            | (%)   | Count            | (%)   | Count          | (%)   | Count         | (%)   | Count         | (%)   |
| <b>Agriculture</b>       | 15810.13         | 0.32  | 2032.43          | 0.13  | 840.17         | 0.22  | 257.23        | 0.38  | 104.04        | 0.49  |
| <b>Commercial</b>        | 299499.12        | 6.05  | 96044.91         | 6.23  | 52666.37       | 14.02 | 18685.40      | 27.96 | 6345.21       | 29.89 |
| <b>Education</b>         | 10405.75         | 0.21  | 1842.03          | 0.12  | 742.35         | 0.20  | 190.04        | 0.28  | 54.82         | 0.26  |
| <b>Government</b>        | 28050.52         | 0.57  | 5160.15          | 0.33  | 2017.53        | 0.54  | 406.13        | 0.61  | 87.67         | 0.41  |
| <b>Industrial</b>        | 75211.50         | 1.52  | 23265.91         | 1.51  | 15689.80       | 4.18  | 6751.34       | 10.10 | 2278.46       | 10.73 |
| <b>Other Residential</b> | 687537.14        | 13.90 | 252235.12        | 16.37 | 95546.12       | 25.43 | 31582.51      | 47.26 | 10609.12      | 49.98 |
| <b>Religion</b>          | 15712.15         | 0.32  | 4529.54          | 0.29  | 2780.80        | 0.74  | 1091.71       | 1.63  | 376.80        | 1.78  |
| <b>Single Family</b>     | 3814989.68       | 77.11 | 1155435.09       | 75.00 | 205398.12      | 54.67 | 7858.23       | 11.76 | 1370.87       | 6.46  |
| <b>Total</b>             | <b>4,947,216</b> |       | <b>1,540,545</b> |       | <b>375,681</b> |       | <b>66,823</b> |       | <b>21,227</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>     | 4431725.64       | 89.58 | 1391722.44       | 90.34 | 244905.48      | 65.19 | 8235.30       | 12.32 | 667.39        | 3.14  |
| <b>Steel</b>    | 68708.80         | 1.39  | 22743.45         | 1.48  | 22632.83       | 6.02  | 10914.05      | 16.33 | 3888.42       | 18.32 |
| <b>Concrete</b> | 72325.20         | 1.46  | 25642.20         | 1.66  | 17379.83       | 4.63  | 7861.57       | 11.76 | 2871.69       | 13.53 |
| <b>Precast</b>  | 37037.46         | 0.75  | 11475.00         | 0.74  | 8497.19        | 2.26  | 2291.98       | 3.43  | 598.78        | 2.82  |
| <b>RM</b>       | 221862.55        | 4.48  | 50064.25         | 3.25  | 28071.45       | 7.47  | 7254.36       | 10.86 | 1107.42       | 5.22  |
| <b>URM</b>      | 5104.55          | 0.10  | 4024.55          | 0.26  | 8992.44        | 2.39  | 8392.14       | 12.56 | 4786.52       | 22.55 |
| <b>MH</b>       | 110451.78        | 2.23  | 34873.28         | 2.26  | 45202.03       | 12.03 | 21873.19      | 32.73 | 7306.77       | 34.42 |
| <b>Total</b>    | <b>4,947,216</b> |       | <b>1,540,545</b> |       | <b>375,681</b> |       | <b>66,823</b> |       | <b>21,227</b> |       |

\*Note:

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

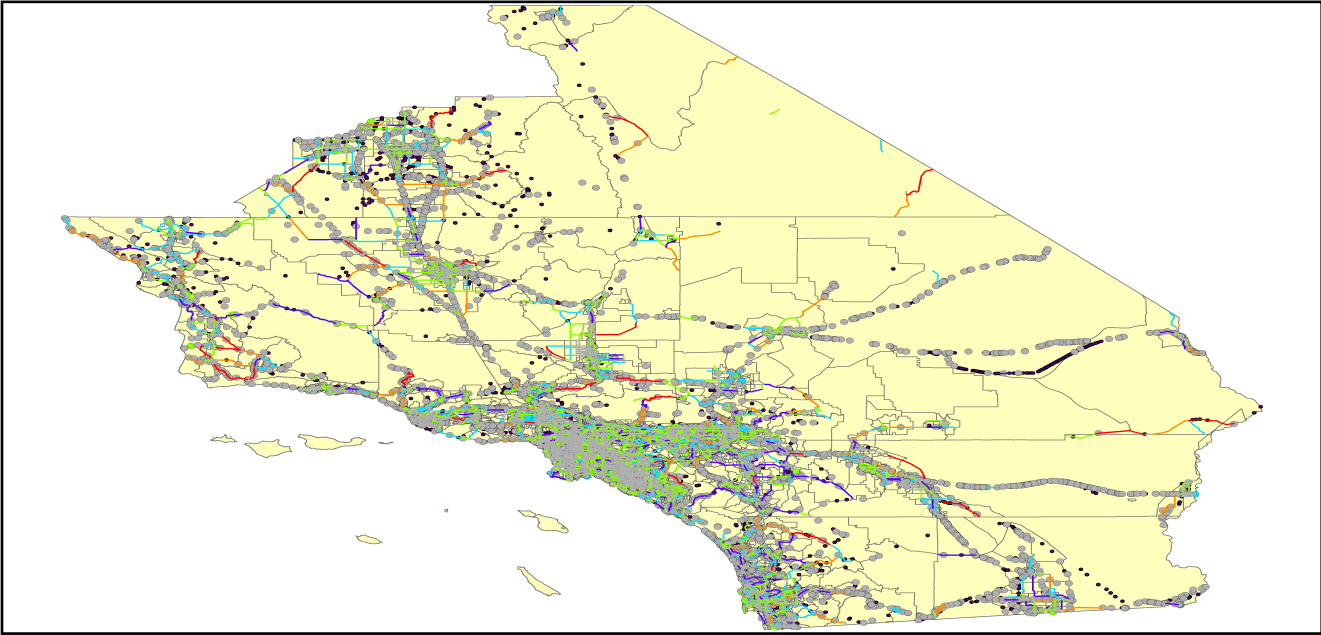
## Essential Facility Damage

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

**Table 5: Expected Damage to Essential Facilities**

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

Transportation Lifeline Damage



**Table 6: Expected Damage to the Transportation Systems**

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

Table 6 provides damage estimates for the transportation system.

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

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

**Table 7 : Expected Utility System Facility Damage**

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

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

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

**Table 9: Expected Potable Water and Electric Power System Performance**

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

## Induced Earthquake Damage

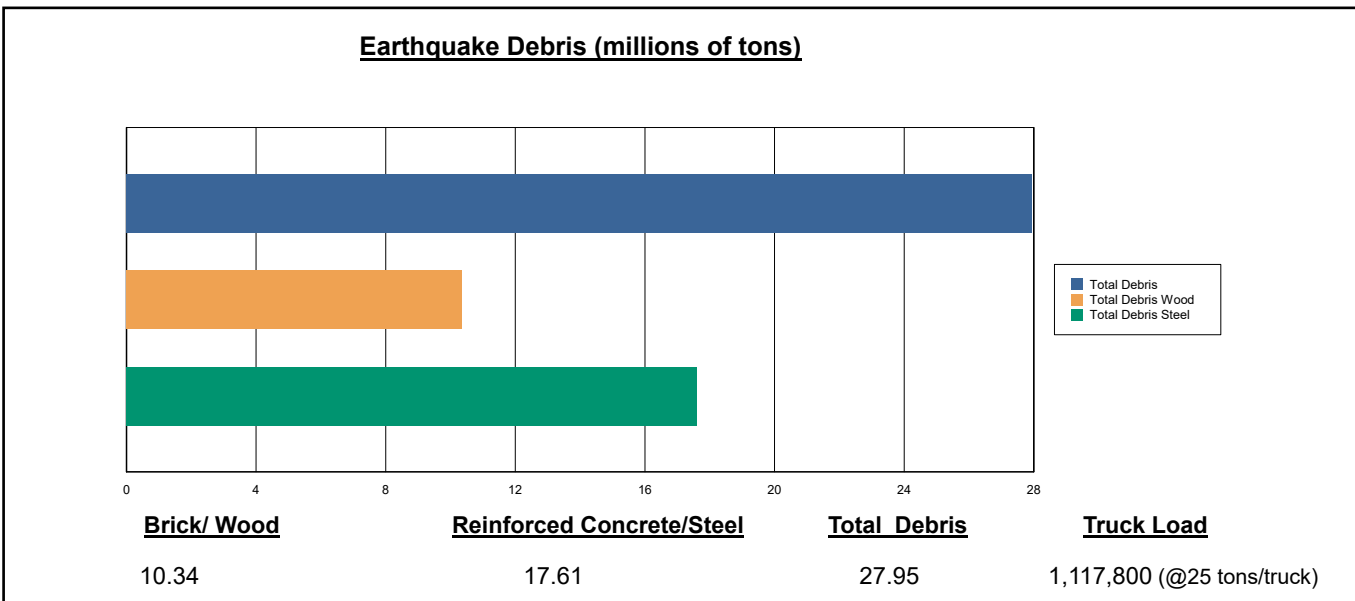
### Fire Following Earthquake

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

### Debris Generation

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

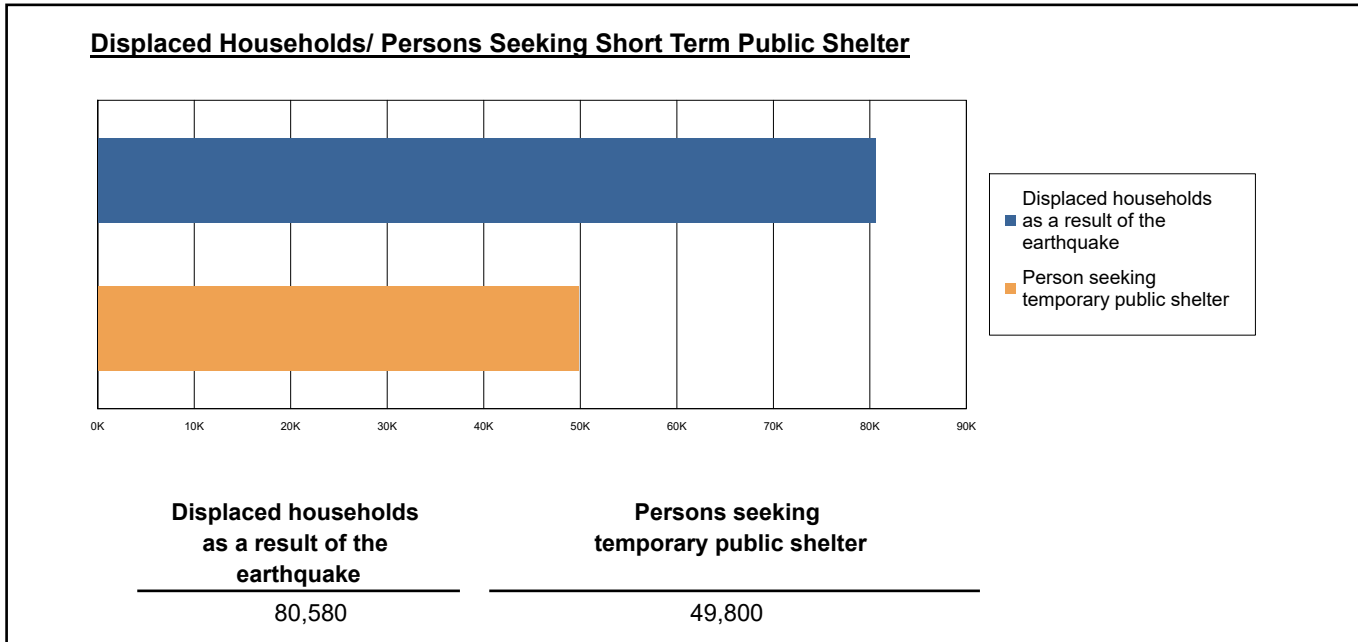
The model estimates that a total of 27,945,000 tons of debris will be generated. Of the total amount, Brick/Wood comprises 37.00% of the total, with the remainder being Reinforced Concrete/Steel. If the debris tonnage is converted to an estimated number of truckloads, it will require 1,117,800 truckloads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



## Social Impact

### Shelter Requirement

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



### Casualties

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

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

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

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

**Table 10: Casualty Estimates**

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

## Economic Loss

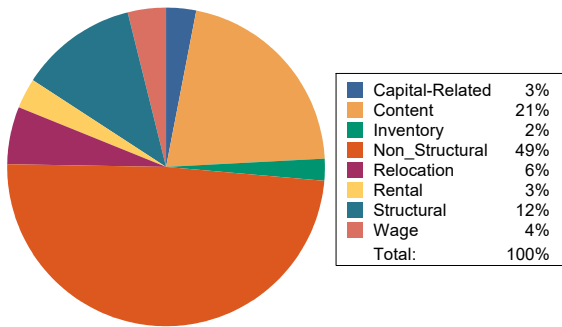
The total economic loss estimated for the earthquake is 185,967.09 (millions of dollars), which includes building and lifeline related losses based on the region's available inventory. The following three sections provide more detailed information about these losses.

## Building-Related Losses

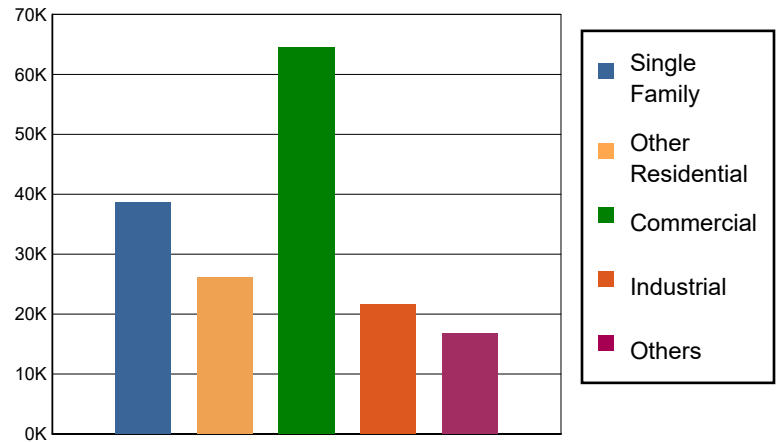
The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability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

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

Earthquake Losses by Loss Type (\$ millions)



Earthquake Losses by Occupancy Type (\$ millions)



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

| Category                    | Area            | Single Family     | Other Residential | Commercial        | Industrial        | Others            | Total              |
|-----------------------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|
| <b>Income Losses</b>        |                 |                   |                   |                   |                   |                   |                    |
|                             | Wage            | 0.0000            | 774.2399          | 5061.1238         | 303.1969          | 517.4871          | 6,656.0477         |
|                             | Capital-Related | 0.0000            | 329.3414          | 4558.3103         | 189.7534          | 154.4989          | 5,231.9040         |
|                             | Rental          | 458.7363          | 1514.5927         | 2745.2461         | 155.0657          | 264.2970          | 5,137.9378         |
|                             | Relocation      | 1560.4969         | 1108.6196         | 4057.2443         | 734.4003          | 2052.5689         | 9,513.3300         |
|                             | <b>Subtotal</b> | <b>2019.2332</b>  | <b>3726.7936</b>  | <b>16421.9245</b> | <b>1382.4163</b>  | <b>2988.8519</b>  | <b>26539.2195</b>  |
| <b>Capital Stock Losses</b> |                 |                   |                   |                   |                   |                   |                    |
|                             | Structural      | 4105.1615         | 2911.8528         | 8340.5004         | 2782.9945         | 1808.1125         | 19,948.6217        |
|                             | Non_Structural  | 23975.1682        | 15721.9887        | 24703.4012        | 9835.3519         | 8098.0007         | 82,333.9107        |
|                             | Content         | 8495.4311         | 3745.1004         | 12629.1182        | 6658.1733         | 3732.1592         | 35,259.9822        |
|                             | Inventory       | 0.0000            | 0.0000            | 2455.4280         | 982.5185          | 121.2061          | 3,559.1526         |
|                             | <b>Subtotal</b> | <b>36575.7608</b> | <b>22378.9419</b> | <b>48128.4478</b> | <b>20259.0382</b> | <b>13759.4785</b> | <b>141101.6672</b> |
|                             | <b>Total</b>    | <b>38594.99</b>   | <b>26105.74</b>   | <b>64550.37</b>   | <b>21641.45</b>   | <b>16748.33</b>   | <b>167640.89</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        | 129524.7356        | 0.0000           | 0.00           |
|              | Bridges         | 68183.0231         | 1679.8788        | 2.46           |
|              | Tunnels         | 553.5147           | 4.1456           | 0.75           |
|              | <b>Subtotal</b> | <b>198261.2734</b> | <b>1684.0244</b> |                |
| Railways     | Segments        | 67063.3892         | 0.0000           | 0.00           |
|              | Bridges         | 12415.5800         | 124.1208         | 1.00           |
|              | Tunnels         | 0.0000             | 0.0000           | 0.00           |
|              | Facilities      | 308.9080           | 44.9224          | 14.54          |
|              | <b>Subtotal</b> | <b>79787.8772</b>  | <b>169.0432</b>  |                |
| Light Rail   | Segments        | 5399.1047          | 0.0000           | 0.00           |
|              | Bridges         | 13.2750            | 0.1426           | 1.07           |
|              | Tunnels         | 0.0000             | 0.0000           | 0.00           |
|              | Facilities      | 3200.8000          | 527.5459         | 16.48          |
|              | <b>Subtotal</b> | <b>8613.1797</b>   | <b>527.6885</b>  |                |
| Bus          | Facilities      | 97.2975            | 11.0402          | 11.35          |
|              | <b>Subtotal</b> | <b>97.2975</b>     | <b>11.0402</b>   |                |
| Ferry        | Facilities      | 29.2820            | 2.6864           | 9.17           |
|              | <b>Subtotal</b> | <b>29.2820</b>     | <b>2.6864</b>    |                |
| Port         | Facilities      | 1349.3930          | 139.9456         | 10.37          |
|              | <b>Subtotal</b> | <b>1349.3930</b>   | <b>139.9456</b>  |                |
| Airport      | Facilities      | 4844.7583          | 605.0008         | 12.49          |
|              | Runways         | 2114.4318          | 0.0000           | 0.00           |
|              | <b>Subtotal</b> | <b>6959.1901</b>   | <b>605.0008</b>  |                |
| <b>Total</b> |                 | <b>295,097.49</b>  | <b>3,139.43</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         | 2082.5820          | 154.6160          | 7.42           |
|                  | Distribution Lines | 5307.8476          | 135.1151          | 2.55           |
|                  | <b>Subtotal</b>    | <b>7390.4296</b>   | <b>289.7311</b>   |                |
| Waste Water      | Pipelines          | 0.0000             | 0.0000            | 0.00           |
|                  | Facilities         | 23385.4448         | 1538.5078         | 6.58           |
|                  | Distribution Lines | 3184.7085          | 67.8718           | 2.13           |
|                  | <b>Subtotal</b>    | <b>26570.1533</b>  | <b>1606.3796</b>  |                |
| Natural Gas      | Pipelines          | 19300.5635         | 0.0000            | 0.00           |
|                  | Facilities         | 1599.3257          | 37.3039           | 2.33           |
|                  | Distribution Lines | 2123.1390          | 23.2524           | 1.10           |
|                  | <b>Subtotal</b>    | <b>23023.0282</b>  | <b>60.5563</b>    |                |
| Oil Systems      | Pipelines          | 0.0000             | 0.0000            | 0.00           |
|                  | Facilities         | 8.0240             | 0.6074            | 7.57           |
|                  | <b>Subtotal</b>    | <b>8.0240</b>      | <b>0.6074</b>     |                |
| Electrical Power | Facilities         | 137018.3076        | 13225.4387        | 9.65           |
|                  | <b>Subtotal</b>    | <b>137018.3076</b> | <b>13225.4387</b> |                |
| Communication    | Facilities         | 56.1680            | 4.0465            | 7.20           |
|                  | <b>Subtotal</b>    | <b>56.1680</b>     | <b>4.0465</b>     |                |
|                  | <b>Total</b>       | <b>194,066.11</b>  | <b>15,186.76</b>  |                |

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## Appendix A: County Listing for the Region

Imperial,CA

Inyo,CA

Kern,CA

Kings,CA

Los Angeles,CA

Orange,CA

Riverside,CA

San Bernardino,CA

San Diego,CA

San Luis Obispo,CA

Santa Barbara,CA

Tulare,CA

Ventura,CA

## Appendix B: Regional Population and Building Value Data

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

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## Hazus: Earthquake Global Risk Report

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**Region Name:** ElsinoreCMJTsGI

**Earthquake Scenario:** elsinorecmjtskishaw0\_m7p69\_se

**Print Date:** April 19, 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 67,301.33 square miles and contains 5,476 census tracts. There are over 7,962 thousand households in the region which has a total population of 23,781,920 people. The distribution of population by Total Region and County is provided in Appendix B.

There are an estimated 6,759 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 283,909 and 189,023 (millions of dollars) , respectively.

## Building and Lifeline Inventory

### Building Inventory

Hazus estimates that there are 6,759 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 335 hospitals in the region with a total bed capacity of 61,417 beds. There are 7,535 schools, 1,335 fire stations, 450 police stations and 121 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 472,932.00 (millions of dollars). This inventory includes over 11,939.02 miles of highways, 11,362 bridges, 248,362.61 miles of pipes.

**Table 1: Transportation System Lifeline Inventory**

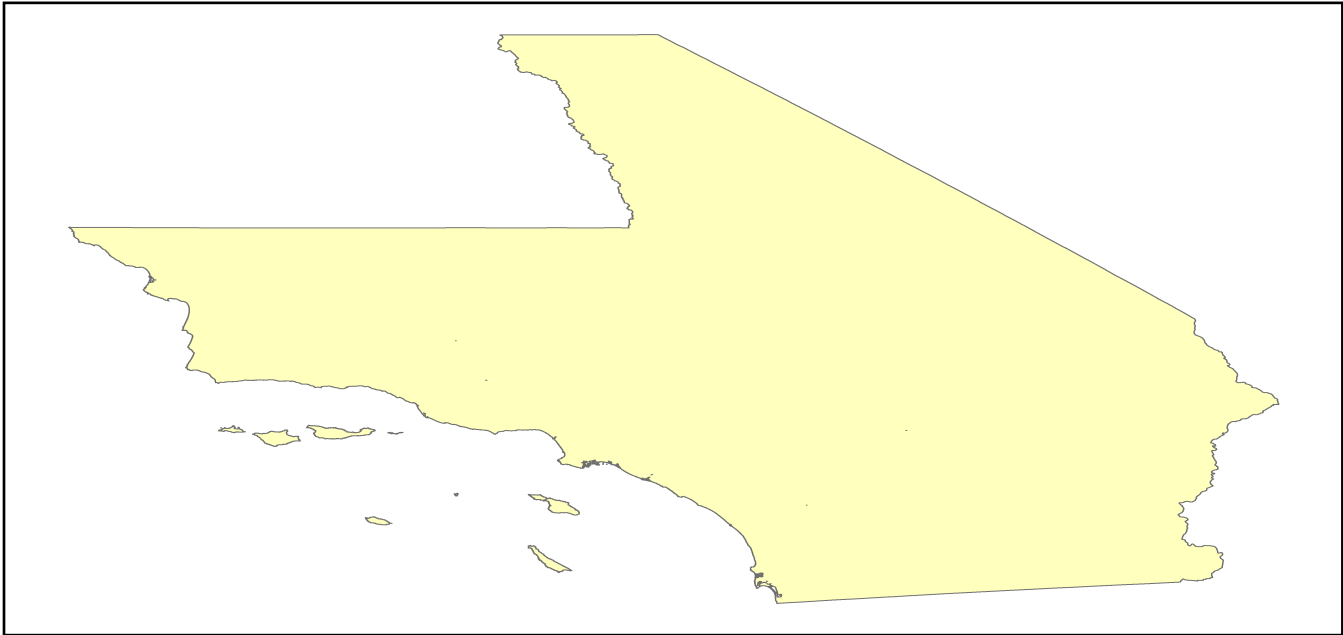
| System            | Component       | # Locations/<br># Segments | Replacement value<br>(millions of dollars) |
|-------------------|-----------------|----------------------------|--|
| <b>Highway</b>    | Bridges         | 11,362                     | 66900.9769                                 |
|                   | Segments        | 9,876                      | 123506.9040                                |
|                   | Tunnels         | 62                         | 553.5147                                   |
|                   | <b>Subtotal</b> |                            | <b>190961.3956</b>                         |
| <b>Railways</b>   | Bridges         | 2,056                      | 11698.6400                                 |
|                   | Facilities      | 111                        | 295.5930                                   |
|                   | Segments        | 1,857                      | 64118.1404                                 |
|                   | Tunnels         | 0                          | 0.0000                                     |
|                   | <b>Subtotal</b> |                            | <b>76112.3734</b>                          |
| <b>Light Rail</b> | Bridges         | 51                         | 13.2750                                    |
|                   | Facilities      | 149                        | 3200.8000                                  |
|                   | Segments        | 8                          | 5399.1047                                  |
|                   | Tunnels         | 0                          | 0.0000                                     |
|                   | <b>Subtotal</b> |                            | <b>8613.1797</b>                           |
| <b>Bus</b>        | Facilities      | 39                         | 84.3959                                    |
|                   | <b>Subtotal</b> |                            | <b>84.3959</b>                             |
| <b>Ferry</b>      | Facilities      | 22                         | 29.2820                                    |
|                   | <b>Subtotal</b> |                            | <b>29.2820</b>                             |
| <b>Port</b>       | Facilities      | 354                        | 1349.3930                                  |
|                   | <b>Subtotal</b> |                            | <b>1349.3930</b>                           |
| <b>Airport</b>    | Facilities      | 158                        | 4780.9463                                  |
|                   | Runways         | 177                        | 1978.1184                                  |
|                   | <b>Subtotal</b> |                            | <b>6759.0647</b>                           |
|                   |                 | <b>Total</b>               | <b>283,909.10</b>                          |

**Table 2: Utility System Lifeline Inventory**

| System                  | Component          | # Locations / Segments | Replacement value (millions of dollars) |
|-------------------------|--------------------|------------------------|---|
| <b>Potable Water</b>    | Distribution Lines | NA                     | 4930.2346                               |
|                         | Facilities         | 52                     | 2043.2880                               |
|                         | Pipelines          | 0                      | 0.0000                                  |
|                         |                    | <b>Subtotal</b>        | <b>6973.5226</b>                        |
| <b>Waste Water</b>      | Distribution Lines | NA                     | 2958.1408                               |
|                         | Facilities         | 133                    | 22869.5894                              |
|                         | Pipelines          | 0                      | 0.0000                                  |
|                         |                    | <b>Subtotal</b>        | <b>25827.7302</b>                       |
| <b>Natural Gas</b>      | Distribution Lines | NA                     | 1972.0938                               |
|                         | Facilities         | 42                     | 1475.0374                               |
|                         | Pipelines          | 336                    | 18604.5147                              |
|                         |                    | <b>Subtotal</b>        | <b>22051.6459</b>                       |
| <b>Oil Systems</b>      | Facilities         | 67                     | 7.9060                                  |
|                         | Pipelines          | 0                      | 0.0000                                  |
|                         |                    | <b>Subtotal</b>        | <b>7.9060</b>                           |
| <b>Electrical Power</b> | Facilities         | 582                    | 134110.2163                             |
|                         |                    | <b>Subtotal</b>        | <b>134110.2163</b>                      |
| <b>Communication</b>    | Facilities         | 441                    | 52.0380                                 |
|                         |                    | <b>Subtotal</b>        | <b>52.0380</b>                          |
|                         | <b>Total</b>       |                        | <b>189,023.10</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>                 | elsinorecmjtsqishaw0_m7p69_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>          | 7.69                          |
| <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 160,151 buildings will be at least moderately damaged. This is over 2.00 % of the buildings in the region. There are an estimated 4,743 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

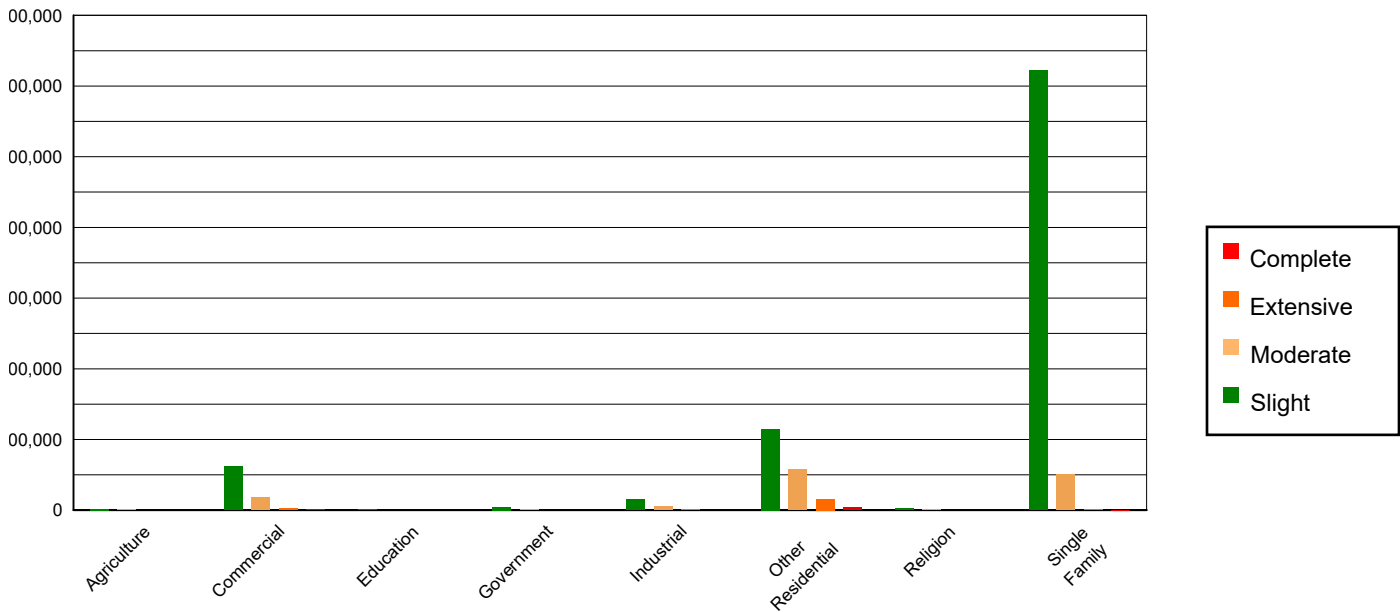


Table 3: Expected Building Damage by Occupancy

|                          | None             |       | Slight         |       | Moderate       |       | Extensive     |       | Complete     |       |
|--------------------------|------------------|-------|----------------|-------|----------------|-------|---------------|-------|--------------|-------|
|                          | Count            | (%)   | Count          | (%)   | Count          | (%)   | Count         | (%)   | Count        | (%)   |
| <b>Agriculture</b>       | 12928.68         | 0.22  | 1668.00        | 0.20  | 488.12         | 0.36  | 78.26         | 0.38  | 19.94        | 0.42  |
| <b>Commercial</b>        | 379375.89        | 6.57  | 61271.60       | 7.44  | 18336.46       | 13.61 | 2566.46       | 12.38 | 499.60       | 10.53 |
| <b>Education</b>         | 11788.89         | 0.20  | 865.57         | 0.11  | 185.39         | 0.14  | 18.67         | 0.09  | 4.47         | 0.09  |
| <b>Government</b>        | 28958.65         | 0.50  | 4649.82        | 0.56  | 1430.10        | 1.06  | 139.58        | 0.67  | 10.86        | 0.23  |
| <b>Industrial</b>        | 98921.01         | 1.71  | 15514.90       | 1.88  | 5319.54        | 3.95  | 659.98        | 3.18  | 78.57        | 1.66  |
| <b>Other Residential</b> | 861869.13        | 14.92 | 114746.45      | 13.93 | 57081.50       | 42.38 | 15626.45      | 75.40 | 3822.47      | 80.58 |
| <b>Religion</b>          | 19739.91         | 0.34  | 2750.11        | 0.33  | 828.03         | 0.61  | 115.08        | 0.56  | 20.87        | 0.44  |
| <b>Single Family</b>     | 4361822.42       | 75.52 | 622129.62      | 75.54 | 51013.69       | 37.88 | 1520.45       | 7.34  | 286.81       | 6.05  |
| <b>Total</b>             | <b>5,775,405</b> |       | <b>823,596</b> |       | <b>134,683</b> |       | <b>20,725</b> |       | <b>4,744</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>     | 5146030.04       | 89.10 | 706737.41      | 85.81 | 55466.86       | 41.18 | 996.12        | 4.81  | 57.10        | 1.20  |
| <b>Steel</b>    | 90112.73         | 1.56  | 20166.59       | 2.45  | 11773.28       | 8.74  | 2031.11       | 9.80  | 265.87       | 5.60  |
| <b>Concrete</b> | 95903.82         | 1.66  | 18442.21       | 2.24  | 6158.20        | 4.57  | 1140.65       | 5.50  | 216.31       | 4.56  |
| <b>Precast</b>  | 44444.52         | 0.77  | 8750.14        | 1.06  | 3511.04        | 2.61  | 251.13        | 1.21  | 27.76        | 0.59  |
| <b>RM</b>       | 269676.98        | 4.67  | 25011.30       | 3.04  | 7432.75        | 5.52  | 684.56        | 3.30  | 89.12        | 1.88  |
| <b>URM</b>      | 18509.35         | 0.32  | 7060.92        | 0.86  | 3770.06        | 2.80  | 1172.69       | 5.66  | 437.52       | 9.22  |
| <b>MH</b>       | 110727.13        | 1.92  | 37427.50       | 4.54  | 46570.63       | 34.58 | 14448.67      | 69.72 | 3649.90      | 76.94 |
| <b>Total</b>    | <b>5,775,405</b> |       | <b>823,596</b> |       | <b>134,683</b> |       | <b>20,725</b> |       | <b>4,744</b> |       |

\*Note:

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

## Essential Facility Damage

Before the earthquake, the region had 61,417 hospital beds available for use. On the day of the earthquake, the model estimates that only 52,676 hospital beds (86.00%) are available for use by patients already in the hospital and those injured by the earthquake. After one week, 94.00% of the beds will be back in service. By 30 days, 99.00% will be operational.

**Table 5: Expected Damage to Essential Facilities**

| Classification | Total | # Facilities                      |                          |                                      |
|----------------|-------|-----------------------------------|--------------------------|--------------------------------------|
|                |       | At Least Moderate<br>Damage > 50% | Complete<br>Damage > 50% | With Functionality<br>> 50% on day 1 |
| Hospitals      | 335   | 10                                | 1                        | 309                                  |
| Schools        | 7,535 | 252                               | 2                        | 7,031                                |
| EOCs           | 121   | 8                                 | 0                        | 110                                  |
| PoliceStations | 450   | 25                                | 2                        | 413                                  |
| FireStations   | 1,335 | 39                                | 1                        | 1,233                                |



**Table 6: Expected Damage to the Transportation Systems**

| System     | Component  | Number of Locations_   |                              |                         |                           |             |
|------------|------------|------------------------|------------------------------|-------------------------|---------------------------|-------------|
|            |            | Locations/<br>Segments | With at Least<br>Mod. Damage | With Complete<br>Damage | With Functionality > 50 % |             |
|            |            |                        |                              |                         | After Day 1               | After Day 7 |
| Highway    | Segments   | 9,876                  | 0                            | 0                       | 9,876                     | 9,876       |
|            | Bridges    | 11,362                 | 40                           | 0                       | 11,343                    | 11,357      |
|            | Tunnels    | 62                     | 0                            | 0                       | 62                        | 62          |
| Railways   | Segments   | 1,857                  | 0                            | 0                       | 1,857                     | 1,857       |
|            | Bridges    | 2,056                  | 0                            | 0                       | 2,056                     | 2,056       |
|            | Tunnels    | 0                      | 0                            | 0                       | 0                         | 0           |
|            | Facilities | 111                    | 1                            | 0                       | 111                       | 111         |
| Light Rail | Segments   | 8                      | 0                            | 0                       | 8                         | 8           |
|            | Bridges    | 51                     | 0                            | 0                       | 51                        | 51          |
|            | Tunnels    | 0                      | 0                            | 0                       | 0                         | 0           |
|            | Facilities | 149                    | 0                            | 0                       | 149                       | 149         |
| Bus        | Facilities | 39                     | 1                            | 0                       | 38                        | 39          |
| Ferry      | Facilities | 22                     | 0                            | 0                       | 22                        | 22          |
| Port       | Facilities | 354                    | 0                            | 0                       | 354                       | 354         |
| Airport    | Facilities | 158                    | 2                            | 0                       | 157                       | 158         |
|            | Runways    | 177                    | 0                            | 0                       | 177                       | 177         |

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    | 52             | 3                             | 0                    | 48                        | 52          |
| Waste Water      | 133            | 8                             | 0                    | 104                       | 133         |
| Natural Gas      | 42             | 1                             | 0                    | 41                        | 42          |
| Oil Systems      | 67             | 0                             | 0                    | 67                        | 67          |
| Electrical Power | 582            | 68                            | 0                    | 548                       | 580         |
| Communication    | 441            | 10                            | 0                    | 434                       | 441         |

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

| System        | Total Pipelines Length (miles) | Number of Leaks | Number of Breaks |
|---------------|--------------------------------|-----------------|------------------|
| Potable Water | 153,175                        | 13752           | 3438             |
| Waste Water   | 91,905                         | 6908            | 1727             |
| Natural Gas   | 3,282                          | 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  | 7,962,075             | 347,696                              | 305,873  | 232,046  | 60,804    | 0         |
| Electric Power |                       | 249,428                              | 169,467  | 78,017   | 9,846     | 323       |

## Induced Earthquake Damage

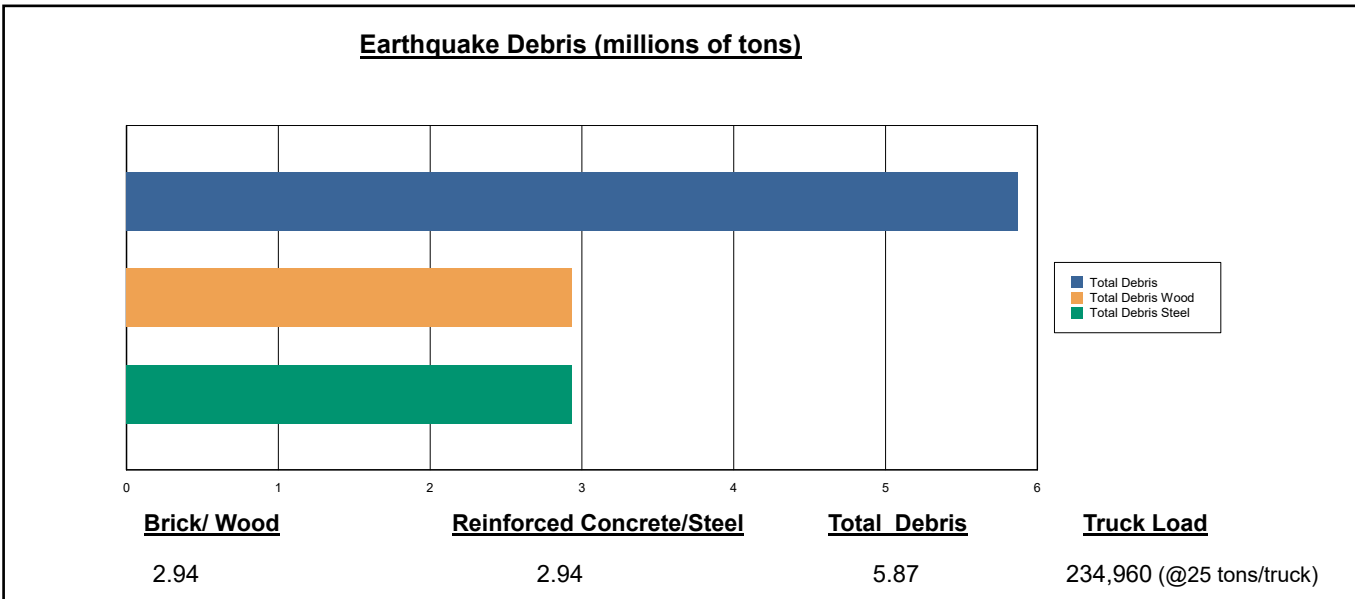
### Fire Following Earthquake

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 93 ignitions that will burn about 0.82 sq. mi 0.00 % of the region's total area.) The model also estimates that the fires will displace about 8,632 people and burn about 885 (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.

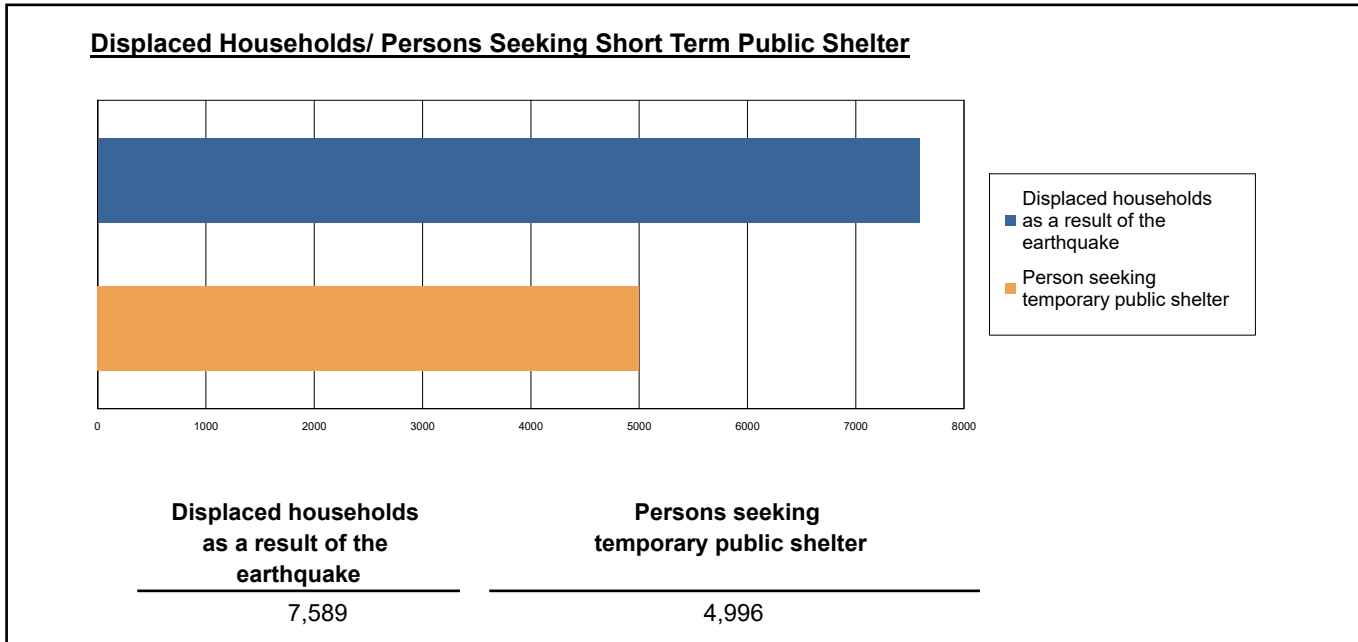
The model estimates that a total of 5,874,000 tons of debris will be generated. Of the total amount, Brick/Wood comprises 50.00% of the total, with the remainder being Reinforced Concrete/Steel. If the debris tonnage is converted to an estimated number of truckloads, it will require 234,960 truckloads (@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 7,589 households to be displaced due to the earthquake. Of these, 4,996 people (out of a total population of 23,781,920) 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        | 43.27        | 5.83       | 0.57       | 1.10       |
|                   | Commuting         | 0.46         | 0.69       | 1.08       | 0.21       |
|                   | Educational       | 0.00         | 0.00       | 0.00       | 0.00       |
|                   | Hotels            | 1.44         | 0.15       | 0.01       | 0.02       |
|                   | Industrial        | 44.63        | 6.32       | 0.60       | 1.17       |
|                   | Other-Residential | 2407.69      | 356.52     | 21.78      | 38.49      |
|                   | Single Family     | 1575.03      | 93.64      | 6.47       | 12.68      |
|                   | <b>Total</b>      | <b>4,073</b> | <b>463</b> | <b>31</b>  | <b>54</b>  |
|                   | <b>2 PM</b>       | Commercial   | 2875.73    | 395.84     | 39.11      |
| Commuting         |                   | 4.17         | 6.22       | 9.71       | 1.92       |
| Educational       |                   | 930.45       | 118.25     | 10.50      | 20.24      |
| Hotels            |                   | 0.28         | 0.03       | 0.00       | 0.00       |
| Industrial        |                   | 326.76       | 46.51      | 4.45       | 8.60       |
| Other-Residential |                   | 710.74       | 105.14     | 6.65       | 11.64      |
| Single Family     |                   | 445.59       | 29.25      | 2.28       | 4.25       |
| <b>Total</b>      |                   | <b>5,294</b> | <b>701</b> | <b>73</b>  | <b>122</b> |
| <b>5 PM</b>       |                   | Commercial   | 1980.75    | 280.83     | 28.68      |
|                   | Commuting         | 78.51        | 116.39     | 182.34     | 36.02      |
|                   | Educational       | 177.46       | 19.07      | 1.14       | 2.14       |
|                   | Hotels            | 0.43         | 0.04       | 0.00       | 0.01       |
|                   | Industrial        | 204.23       | 29.07      | 2.78       | 5.37       |
|                   | Other-Residential | 875.52       | 130.69     | 8.35       | 14.63      |
|                   | Single Family     | 578.86       | 37.10      | 2.80       | 5.23       |
|                   | <b>Total</b>      | <b>3,896</b> | <b>613</b> | <b>226</b> | <b>118</b> |

## Economic Loss

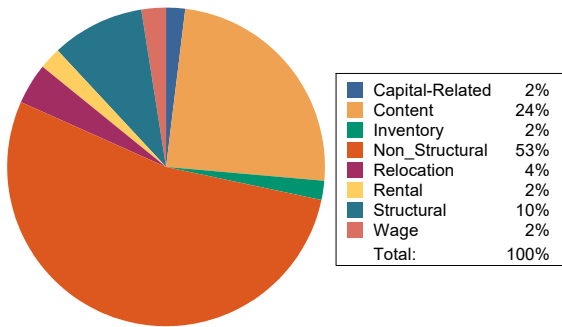
The total economic loss estimated for the earthquake is 65,361.66 (millions of dollars), which includes building and lifeline related losses based on the region's available inventory. The following three sections provide more detailed information about these losses.

## Building-Related Losses

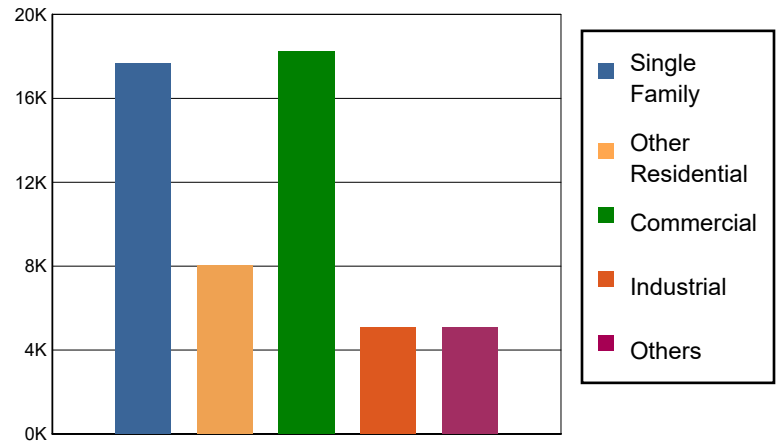
The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability 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 54,088.33 (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 48 % 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            | 91.0736           | 1024.3912         | 48.4484          | 145.4510         | 1,309.3642        |
|                             | Capital-Related | 0.0000            | 38.7112           | 962.4231          | 30.2259          | 32.7199          | 1,064.0801        |
|                             | Rental          | 147.5936          | 309.5490          | 685.3513          | 25.7611          | 67.5176          | 1,235.7726        |
|                             | Relocation      | 422.4409          | 356.9336          | 857.0329          | 132.9806         | 386.0765         | 2,155.4645        |
|                             | <b>Subtotal</b> | <b>570.0345</b>   | <b>796.2674</b>   | <b>3529.1985</b>  | <b>237.4160</b>  | <b>631.7650</b>  | <b>5764.6814</b>  |
| <b>Capital Stock Losses</b> |                 |                   |                   |                   |                  |                  |                   |
|                             | Structural      | 1729.2636         | 853.6019          | 1714.2349         | 433.8159         | 425.3854         | 5,156.3017        |
|                             | Non_Structural  | 11273.8134        | 5068.8750         | 7608.0083         | 2425.5703        | 2484.5936        | 28,860.8606       |
|                             | Content         | 4086.6435         | 1317.5551         | 4575.0123         | 1721.4944        | 1439.1409        | 13,139.8462       |
|                             | Inventory       | 0.0000            | 0.0000            | 820.1770          | 260.0157         | 86.4473          | 1,166.6400        |
|                             | <b>Subtotal</b> | <b>17089.7205</b> | <b>7240.0320</b>  | <b>14717.4325</b> | <b>4840.8963</b> | <b>4435.5672</b> | <b>48323.6485</b> |
|                             | <b>Total</b>    | <b>17659.76</b>   | <b>8036.30</b>    | <b>18246.63</b>   | <b>5078.31</b>   | <b>5067.33</b>   | <b>54088.33</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        | 123506.9040        | 0.0000          | 0.00           |
|              | Bridges         | 66900.9769         | 485.6529        | 0.73           |
|              | Tunnels         | 553.5147           | 0.9277          | 0.17           |
|              | <b>Subtotal</b> | <b>190961.3956</b> | <b>486.5806</b> |                |
| Railways     | Segments        | 64118.1404         | 0.0000          | 0.00           |
|              | Bridges         | 11698.6400         | 18.7851         | 0.16           |
|              | Tunnels         | 0.0000             | 0.0000          | 0.00           |
|              | Facilities      | 295.5930           | 24.0877         | 8.15           |
|              | <b>Subtotal</b> | <b>76112.3734</b>  | <b>42.8728</b>  |                |
| Light Rail   | Segments        | 5399.1047          | 0.0000          | 0.00           |
|              | Bridges         | 13.2750            | 0.0014          | 0.01           |
|              | Tunnels         | 0.0000             | 0.0000          | 0.00           |
|              | Facilities      | 3200.8000          | 230.3383        | 7.20           |
|              | <b>Subtotal</b> | <b>8613.1797</b>   | <b>230.3397</b> |                |
| Bus          | Facilities      | 84.3959            | 6.4733          | 7.67           |
|              | <b>Subtotal</b> | <b>84.3959</b>     | <b>6.4733</b>   |                |
| Ferry        | Facilities      | 29.2820            | 1.8023          | 6.15           |
|              | <b>Subtotal</b> | <b>29.2820</b>     | <b>1.8023</b>   |                |
| Port         | Facilities      | 1349.3930          | 84.3373         | 6.25           |
|              | <b>Subtotal</b> | <b>1349.3930</b>   | <b>84.3373</b>  |                |
| Airport      | Facilities      | 4780.9463          | 321.4792        | 6.72           |
|              | Runways         | 1978.1184          | 0.0000          | 0.00           |
|              | <b>Subtotal</b> | <b>6759.0647</b>   | <b>321.4792</b> |                |
| <b>Total</b> |                 | <b>283,909.08</b>  | <b>1,173.89</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         | 2043.2880          | 94.0983          | 4.61           |
|                  | Distribution Lines | 4930.2346          | 61.8846          | 1.26           |
|                  | <b>Subtotal</b>    | <b>6973.5226</b>   | <b>155.9829</b>  |                |
| Waste Water      | Pipelines          | 0.0000             | 0.0000           | 0.00           |
|                  | Facilities         | 22869.5894         | 1119.9341        | 4.90           |
|                  | Distribution Lines | 2958.1408          | 31.0862          | 1.05           |
|                  | <b>Subtotal</b>    | <b>25827.7302</b>  | <b>1151.0203</b> |                |
| Natural Gas      | Pipelines          | 18604.5147         | 0.0000           | 0.00           |
|                  | Facilities         | 1475.0374          | 24.2013          | 1.64           |
|                  | Distribution Lines | 1972.0938          | 10.6499          | 0.54           |
|                  | <b>Subtotal</b>    | <b>22051.6459</b>  | <b>34.8512</b>   |                |
| Oil Systems      | Pipelines          | 0.0000             | 0.0000           | 0.00           |
|                  | Facilities         | 7.9060             | 0.1588           | 2.01           |
|                  | <b>Subtotal</b>    | <b>7.9060</b>      | <b>0.1588</b>    |                |
| Electrical Power | Facilities         | 134110.2163        | 8755.2805        | 6.53           |
|                  | <b>Subtotal</b>    | <b>134110.2163</b> | <b>8755.2805</b> |                |
| Communication    | Facilities         | 52.0380            | 2.1454           | 4.12           |
|                  | <b>Subtotal</b>    | <b>52.0380</b>     | <b>2.1454</b>    |                |
|                  | <b>Total</b>       | <b>189,023.06</b>  | <b>10,099.44</b> |                |

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## Appendix A: County Listing for the Region

Imperial,CA

Inyo,CA

Kern,CA

Los Angeles,CA

Orange,CA

Riverside,CA

San Bernardino,CA

San Diego,CA

San Luis Obispo,CA

Santa Barbara,CA

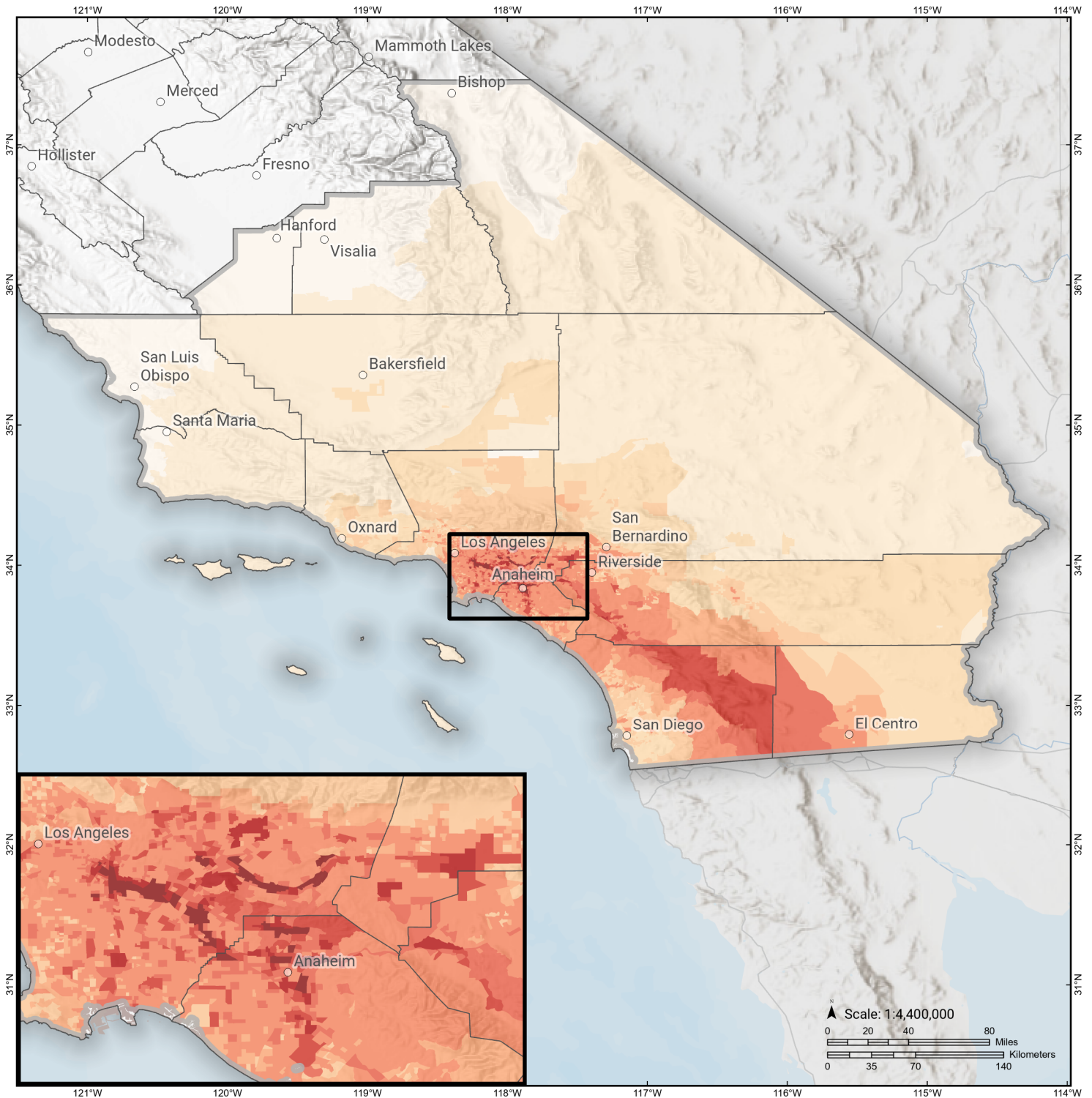
Ventura,CA

## Appendix B: Regional Population and Building Value Data

| State               | County Name     | Population        | Building Value (millions of dollars) |                  |                  |
|---------------------|-----------------|-------------------|--------------------------------------|------------------|------------------|
|                     |                 |                   | Residential                          | Non-Residential  | Total            |
| California          | Imperial        | 179,702           | 20,945                               | 12,603           | 33,548           |
|                     | Inyo            | 19,016            | 2,951                                | 1,970            | 4,921            |
|                     | Kern            | 909,235           | 87,567                               | 59,168           | 146,736          |
|                     | Los Angeles     | 10,014,009        | 950,697                              | 566,995          | 1,517,692        |
|                     | Orange          | 3,186,989         | 363,381                              | 176,806          | 540,188          |
|                     | Riverside       | 2,418,185         | 281,482                              | 137,249          | 418,731          |
|                     | San Bernardino  | 2,181,654         | 225,045                              | 152,557          | 377,602          |
|                     | San Diego       | 3,298,634         | 375,834                              | 193,238          | 569,072          |
|                     | San Luis Obispo | 282,424           | 41,720                               | 20,896           | 62,616           |
|                     | Santa Barbara   | 448,229           | 49,971                               | 28,481           | 78,452           |
| Ventura             | 843,843         | 99,299            | 52,072                               | 151,371          |                  |
| <b>Total Region</b> |                 | <b>23,781,920</b> | <b>2,498,892</b>                     | <b>1,402,035</b> | <b>3,900,929</b> |

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

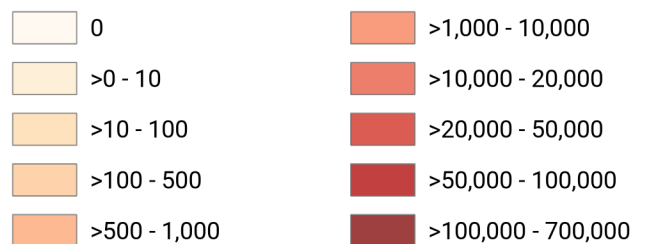
## Debris Generated by Census Tract



**Study Region:** Elsinore: CM+J+T+s+GI+W  
**Scenario:** elsinorecmjtgishaw\_m7p77\_se

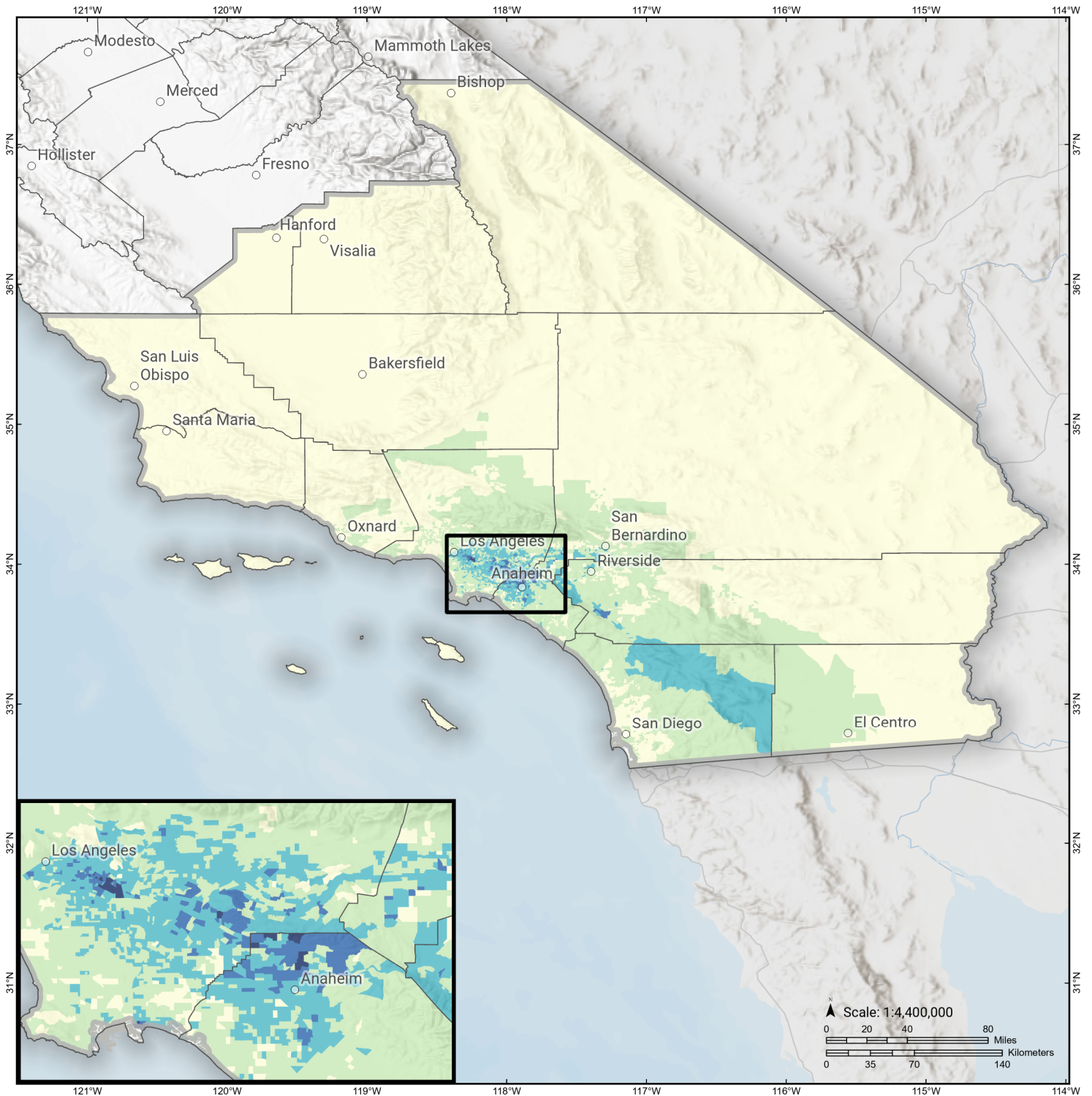


### Debris Generated (in tons)



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

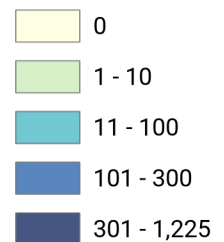
## Displaced Households by Census Tract



**Study Region:** Elsinore: CM+J+T+s+GI+W  
**Scenario:** elsinorecmjtgishaw\_m7p77\_se

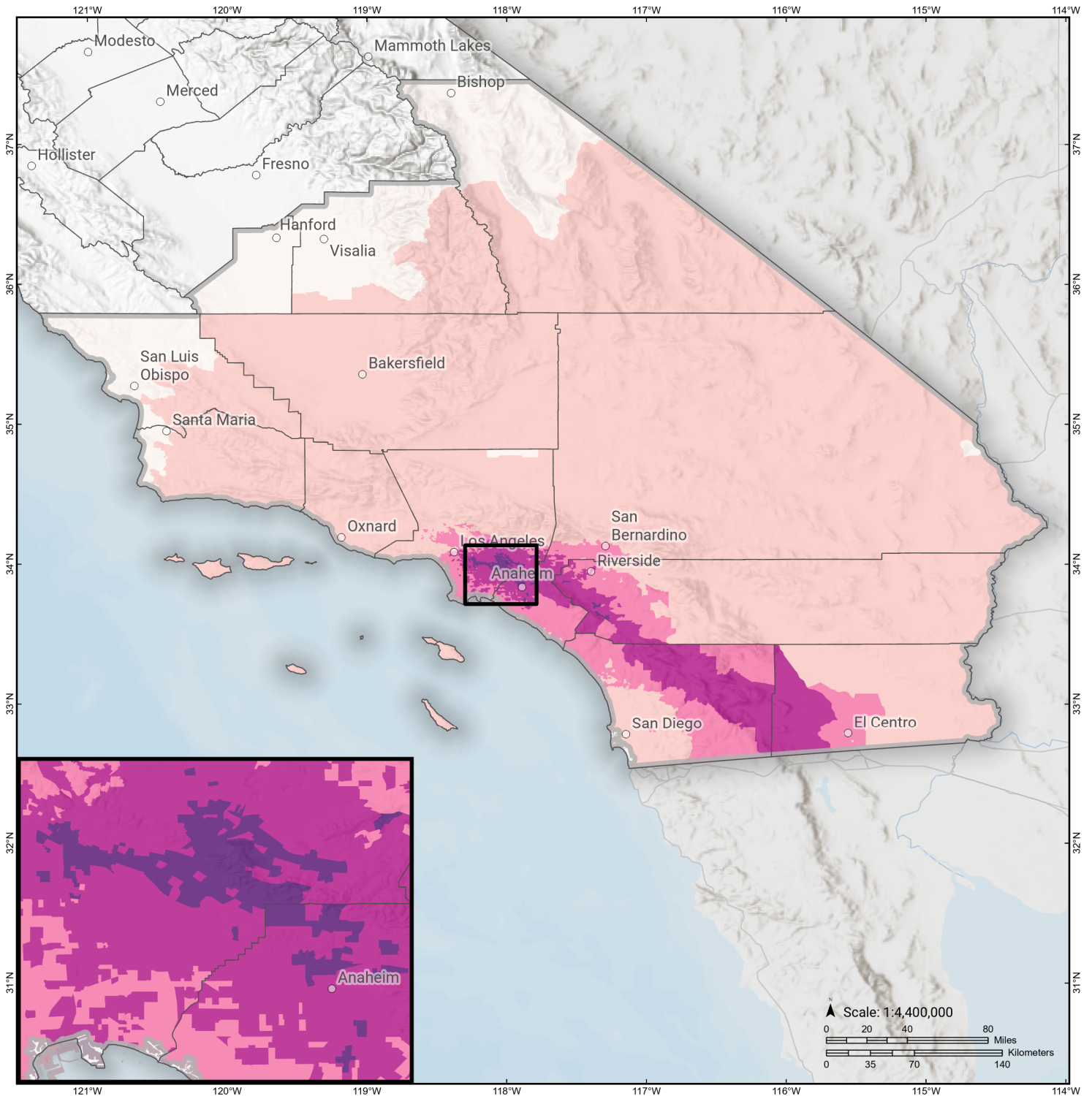


### Displaced Households



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

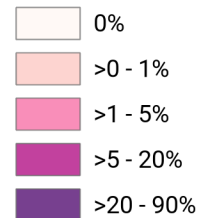
## Loss Ratio by Census Tract



**Study Region:** Elsinore: CM+J+T+s+GI+W  
**Scenario:** elsinorecmjtgishaw\_m7p77\_se

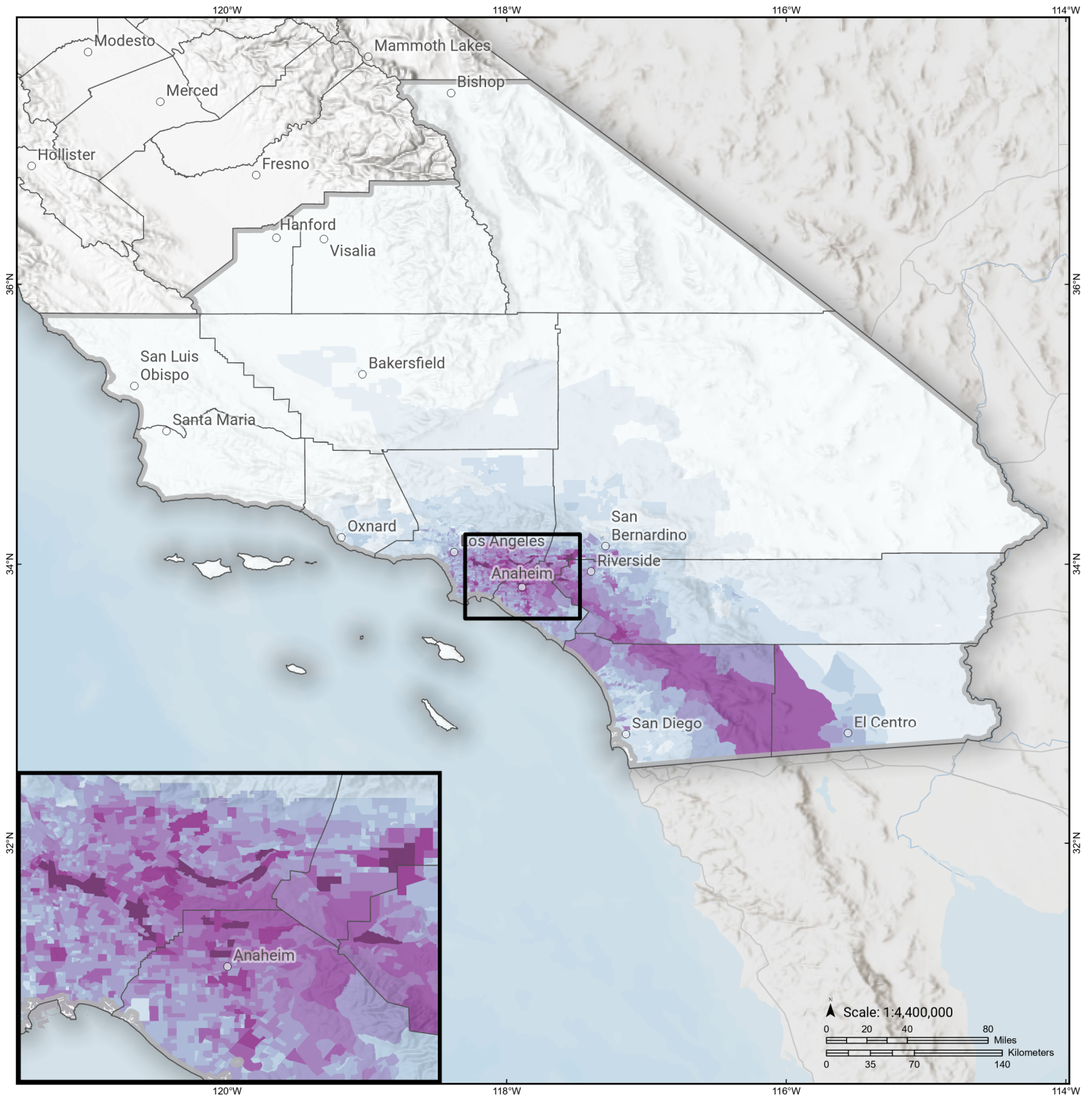


**Loss Ratio** (ratio of building related economic loss to exposed value of buildings)



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

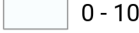
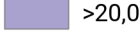








## Total Building Related Economic Loss by Census Tract



**Study Region:** Elsinore: CM+J+T+s+GI+W  
**Scenario:** elsinorecmjtgishaw\_m7p77\_se

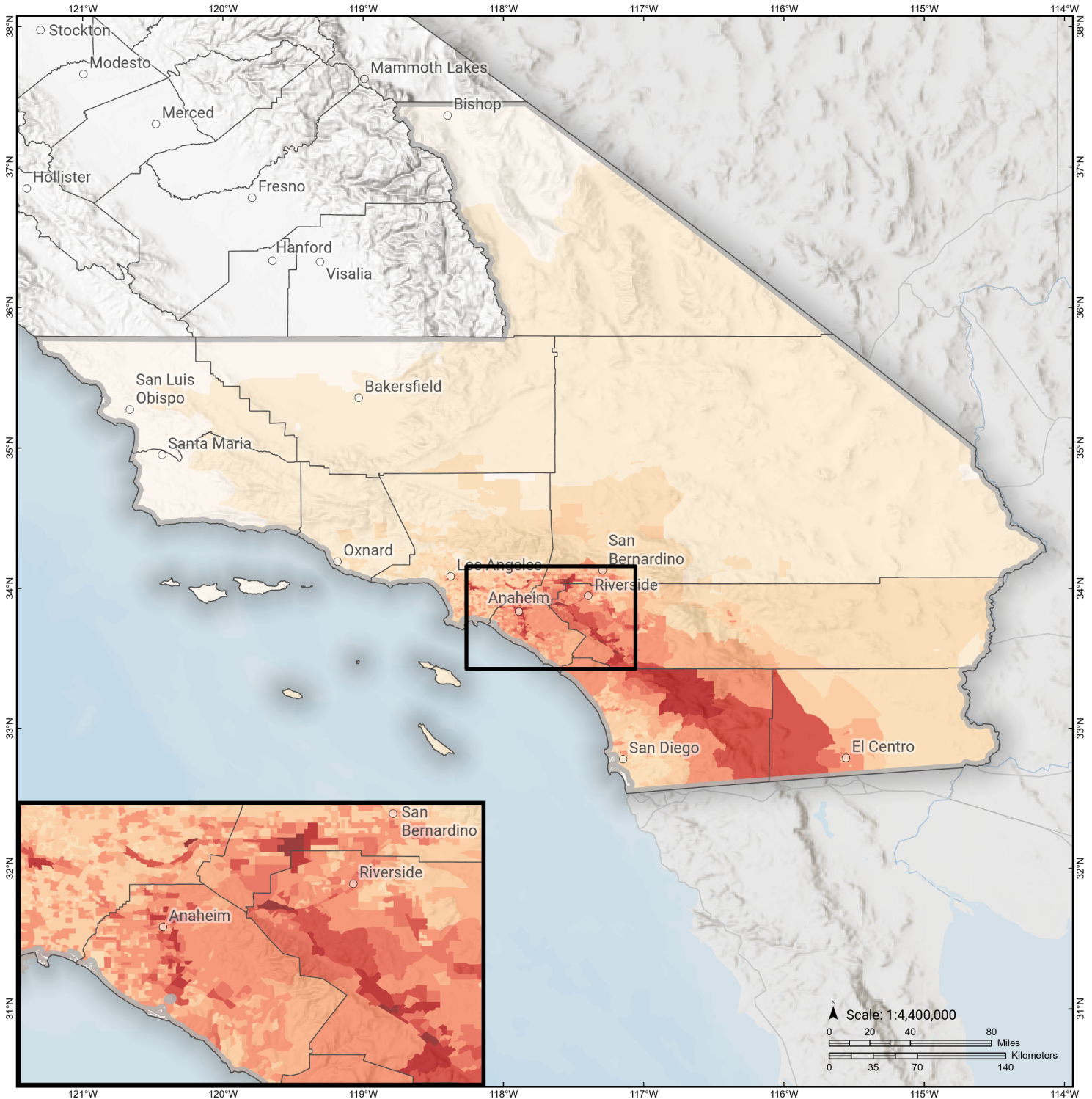


### Economic Loss (in thousands of USD \$)

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

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

## Debris Generated by Census Tract



**Study Region:** Elsinore: CM+J+T+s+GI  
**Scenario:** elsinorecmjtgishaw0\_m7p69\_se

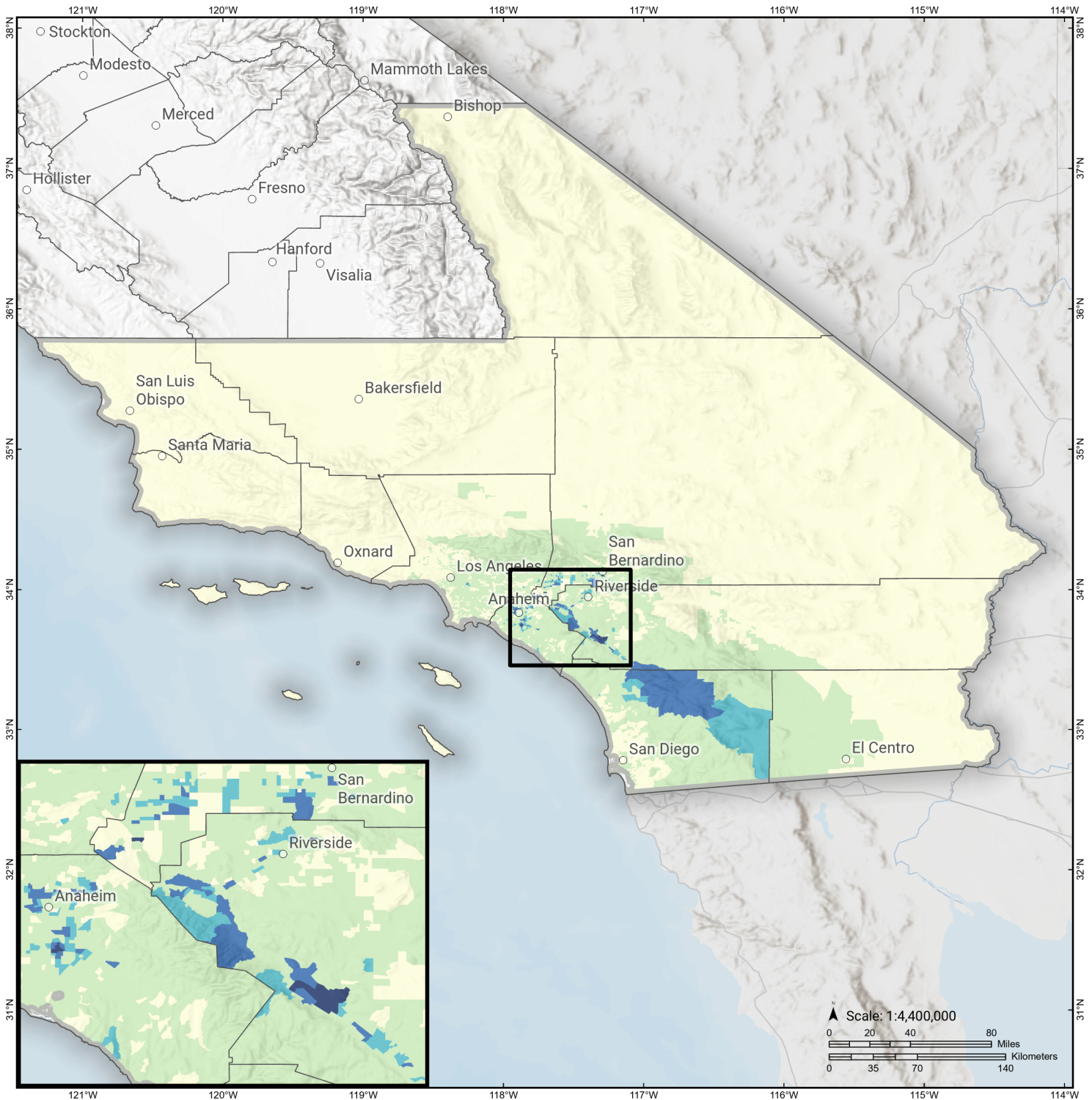


### Debris Generated (in tons)



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

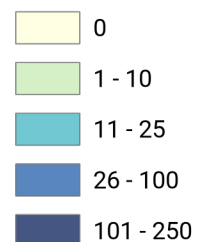
## Displaced Households by Census Tract



**Study Region:** Elsinore: CM+J+T+s+GI  
**Scenario:** elsinorecmjtgishaw0\_m7p69\_se

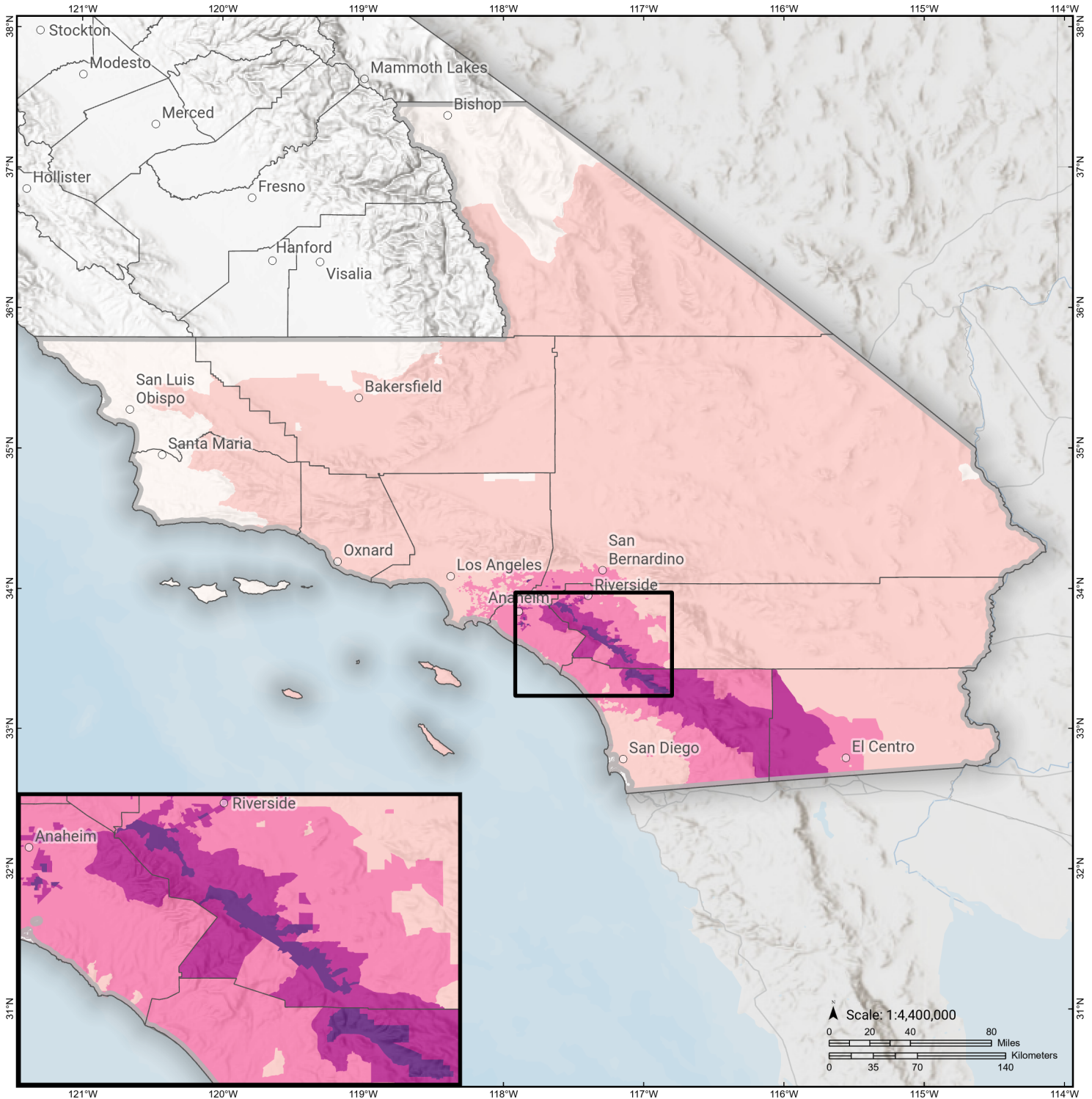


### Displaced Households



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

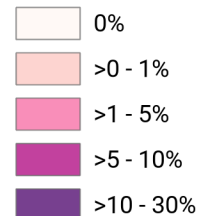
## Loss Ratio by Census Tract



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**Scenario:** elsinorecmjtgshaw0\_m7p69\_se

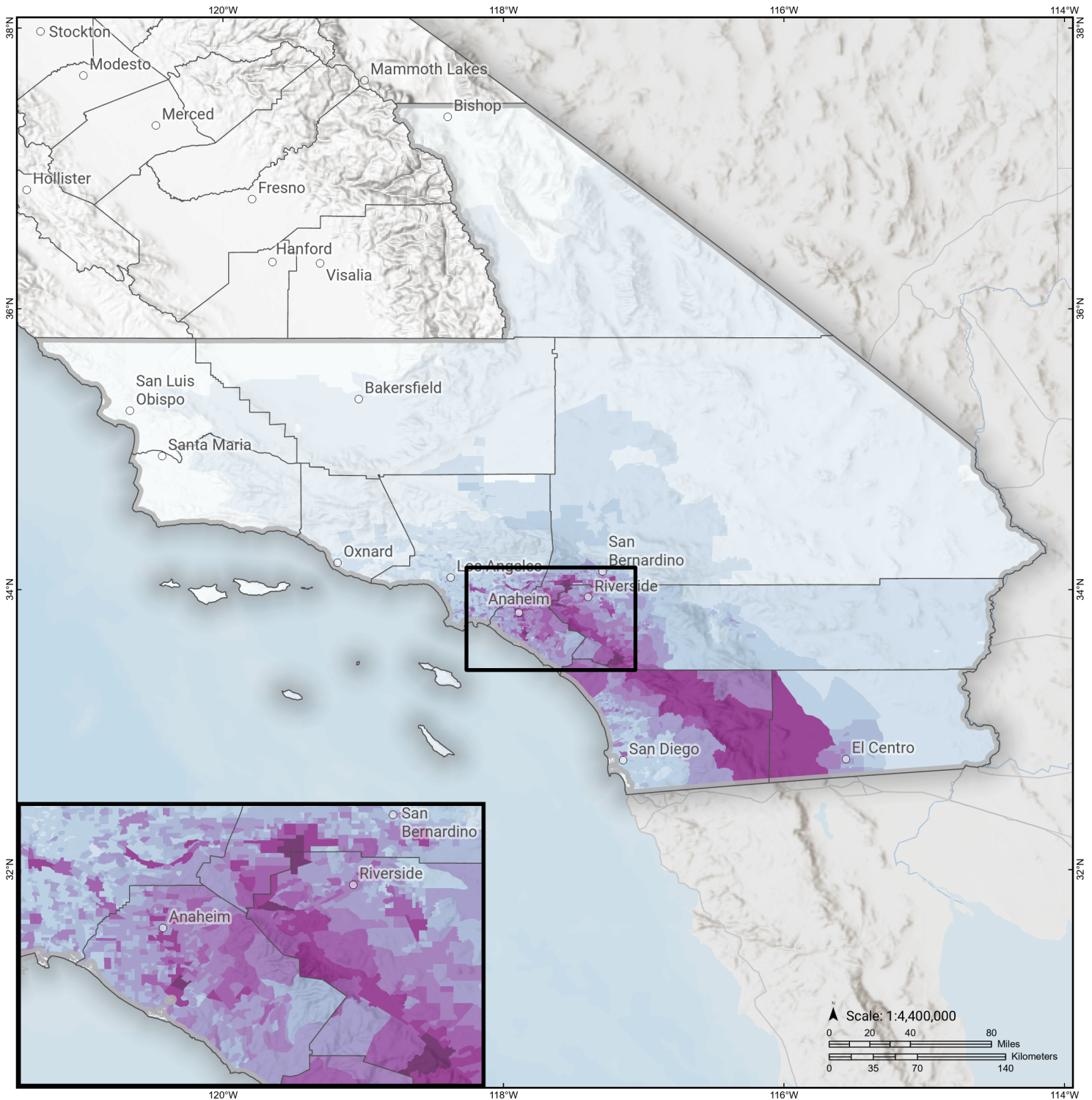


**Loss Ratio** (*ratio of building related economic loss to exposed value of buildings*)



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

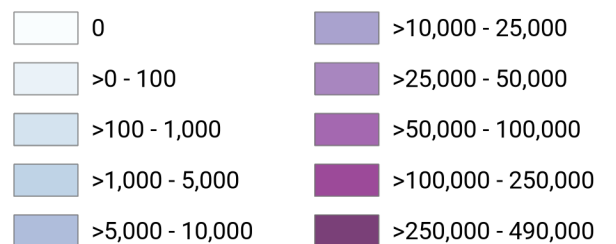
## Total Building Related Economic Loss by Census Tract



**Study Region:** Elsinore: CM+J+T+s+GI  
**Scenario:** elsinorecmjtgshaw0\_m7p69\_se



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



## Building Damage by Count by General Occupancy

May 22, 2024

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

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

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

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

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

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

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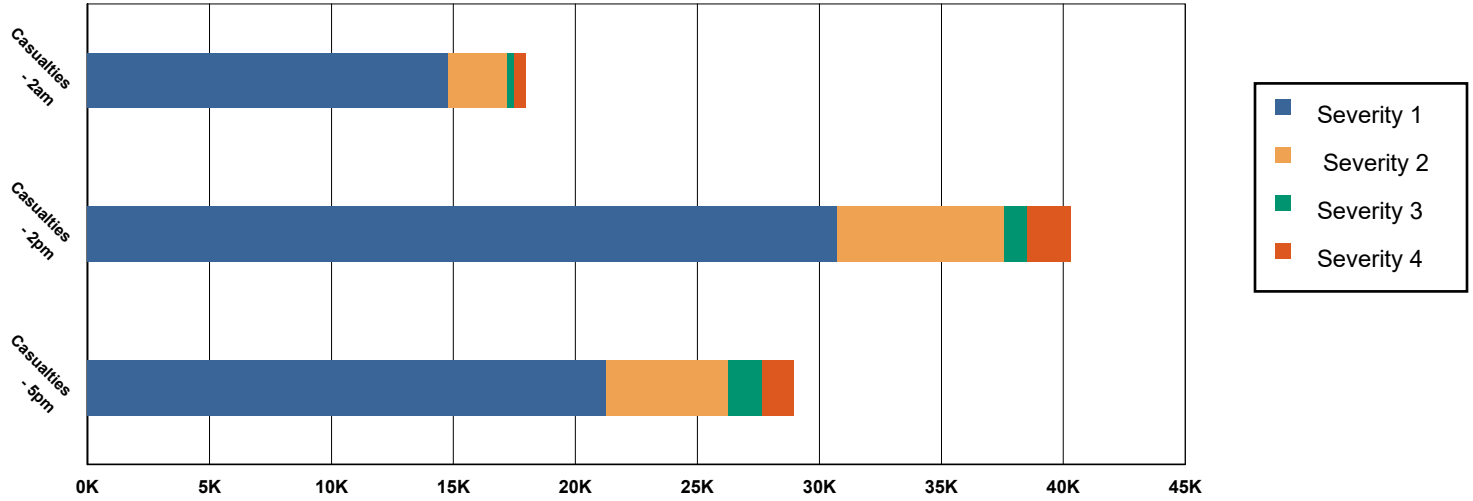
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*Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.*

## Casualties Summary Report

May 22, 2024

### Region Total Casualties



### Injury Severity Level

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

#### California

##### Imperial

##### Casualties - 2am

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

##### Casualties - 2pm

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

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

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

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

## Injury Severity Level

Severity 1      Severity 2      Severity 3      Severity 4      Total

### California

#### Orange

##### Casualties - 2am

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

##### Casualties - 2pm

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

##### Casualties - 5pm

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

#### Riverside

##### Casualties - 2am

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

##### Casualties - 2pm

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

## Injury Severity Level

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

### California

#### Riverside

##### Casualties - 2pm

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

##### Casualties - 5pm

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

#### San Bernardino

##### Casualties - 2am

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

##### Casualties - 2pm

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

##### Casualties - 5pm

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

## Injury Severity Level

Severity 1      Severity 2      Severity 3      Severity 4      Total

### California

#### San Bernardino

|                               |            |           |           |           |            |
|-------------------------------|------------|-----------|-----------|-----------|------------|
| <b>Total Casualties - 5pm</b> | <b>407</b> | <b>63</b> | <b>25</b> | <b>12</b> | <b>508</b> |
|-------------------------------|------------|-----------|-----------|-----------|------------|

#### San Diego

##### Casualties - 2am

|                          |     |    |   |   |     |
|--------------------------|-----|----|---|---|-----|
| <i>Commercial</i>        | 9   | 1  | 0 | 0 | 10  |
| <i>Other-Residential</i> | 129 | 11 | 0 | 0 | 141 |
| <i>Commuting</i>         | 0   | 0  | 0 | 0 | 0   |
| <i>Educational</i>       | 0   | 0  | 0 | 0 | 0   |
| <i>Single Family</i>     | 102 | 3  | 0 | 0 | 106 |
| <i>Industrial</i>        | 1   | 0  | 0 | 0 | 1   |
| <i>Hotels</i>            | 0   | 0  | 0 | 0 | 0   |

|                               |            |           |          |          |            |
|-------------------------------|------------|-----------|----------|----------|------------|
| <b>Total Casualties - 2am</b> | <b>241</b> | <b>15</b> | <b>1</b> | <b>1</b> | <b>258</b> |
|-------------------------------|------------|-----------|----------|----------|------------|

##### Casualties - 2pm

|                          |     |    |   |   |     |
|--------------------------|-----|----|---|---|-----|
| <i>Hotels</i>            | 0   | 0  | 0 | 0 | 0   |
| <i>Educational</i>       | 32  | 2  | 0 | 0 | 34  |
| <i>Commuting</i>         | 0   | 0  | 0 | 0 | 0   |
| <i>Commercial</i>        | 561 | 46 | 2 | 4 | 612 |
| <i>Other-Residential</i> | 43  | 4  | 0 | 0 | 48  |
| <i>Single Family</i>     | 32  | 1  | 0 | 0 | 34  |
| <i>Industrial</i>        | 10  | 1  | 0 | 0 | 10  |

|                               |            |           |          |          |            |
|-------------------------------|------------|-----------|----------|----------|------------|
| <b>Total Casualties - 2pm</b> | <b>678</b> | <b>54</b> | <b>2</b> | <b>4</b> | <b>739</b> |
|-------------------------------|------------|-----------|----------|----------|------------|

##### Casualties - 5pm

|                          |     |    |   |   |     |
|--------------------------|-----|----|---|---|-----|
| <i>Other-Residential</i> | 46  | 4  | 0 | 0 | 50  |
| <i>Commercial</i>        | 326 | 26 | 1 | 2 | 356 |
| <i>Commuting</i>         | 2   | 2  | 4 | 1 | 9   |
| <i>Single Family</i>     | 37  | 1  | 0 | 0 | 38  |
| <i>Educational</i>       | 6   | 0  | 0 | 0 | 6   |
| <i>Hotels</i>            | 0   | 0  | 0 | 0 | 0   |
| <i>Industrial</i>        | 6   | 0  | 0 | 0 | 6   |

|                               |            |           |          |          |            |
|-------------------------------|------------|-----------|----------|----------|------------|
| <b>Total Casualties - 5pm</b> | <b>422</b> | <b>35</b> | <b>5</b> | <b>3</b> | <b>465</b> |
|-------------------------------|------------|-----------|----------|----------|------------|

#### San Luis Obispo

##### Casualties - 2am

|                          |   |   |   |   |   |
|--------------------------|---|---|---|---|---|
| <i>Commercial</i>        | 0 | 0 | 0 | 0 | 0 |
| <i>Other-Residential</i> | 0 | 0 | 0 | 0 | 0 |
| <i>Industrial</i>        | 0 | 0 | 0 | 0 | 0 |
| <i>Single Family</i>     | 0 | 0 | 0 | 0 | 0 |
| <i>Commuting</i>         | 0 | 0 | 0 | 0 | 0 |
| <i>Educational</i>       | 0 | 0 | 0 | 0 | 0 |
| <i>Hotels</i>            | 0 | 0 | 0 | 0 | 0 |

|                               |          |          |          |          |          |
|-------------------------------|----------|----------|----------|----------|----------|
| <b>Total Casualties - 2am</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> |
|-------------------------------|----------|----------|----------|----------|----------|

##### Casualties - 2pm

|                      |   |   |   |   |   |
|----------------------|---|---|---|---|---|
| <i>Single Family</i> | 0 | 0 | 0 | 0 | 0 |
|----------------------|---|---|---|---|---|

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

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

|                               | Injury Severity Level |            |            |            | Total    |
|-------------------------------|-----------------------|------------|------------|------------|----------|
|                               | Severity 1            | Severity 2 | Severity 3 | Severity 4 |          |
| <b>California</b>             |                       |            |            |            |          |
| <b>Ventura</b>                |                       |            |            |            |          |
| <b>Total Casualties - 2am</b> | <b>5</b>              | <b>0</b>   | <b>0</b>   | <b>0</b>   | <b>5</b> |
| <b>Casualties - 2pm</b>       |                       |            |            |            |          |
| <i>Industrial</i>             | 1                     | 0          | 0          | 0          | 1        |
| <i>Educational</i>            | 1                     | 0          | 0          | 0          | 1        |
| <i>Commuting</i>              | 0                     | 0          | 0          | 0          | 0        |
| <i>Hotels</i>                 | 0                     | 0          | 0          | 0          | 0        |
| <i>Other-Residential</i>      | 1                     | 0          | 0          | 0          | 1        |
| <i>Commercial</i>             | 3                     | 0          | 0          | 0          | 3        |
| <i>Single Family</i>          | 1                     | 0          | 0          | 0          | 1        |
| <b>Total Casualties - 2pm</b> | <b>6</b>              | <b>0</b>   | <b>0</b>   | <b>0</b>   | <b>7</b> |
| <b>Casualties - 5pm</b>       |                       |            |            |            |          |
| <i>Commuting</i>              | 0                     | 0          | 0          | 0          | 0        |
| <i>Other-Residential</i>      | 1                     | 0          | 0          | 0          | 1        |
| <i>Commercial</i>             | 2                     | 0          | 0          | 0          | 2        |
| <i>Hotels</i>                 | 0                     | 0          | 0          | 0          | 0        |
| <i>Educational</i>            | 0                     | 0          | 0          | 0          | 0        |
| <i>Single Family</i>          | 1                     | 0          | 0          | 0          | 1        |
| <i>Industrial</i>             | 0                     | 0          | 0          | 0          | 0        |
| <b>Total Casualties - 5pm</b> | <b>5</b>              | <b>0</b>   | <b>0</b>   | <b>0</b>   | <b>5</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 22, 2024

All values are in thousands of tons.

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

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**Brick, Wood & Others**

**Concrete & Steel**

**Total**

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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 22, 2024

All values are in thousands of dollars

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

|                     | Capital Stock Losses   |                         |                      |                  | Loss Ratio % | Income Losses    |                      |                  |                    | Total Loss         |
|---------------------|------------------------|-------------------------|----------------------|------------------|--------------|------------------|----------------------|------------------|--------------------|--------------------|
|                     | Cost Structural Damage | Cost Non-struct. Damage | Cost Contents Damage | Inventory Loss   |              | Relocation Loss  | Capital Related Loss | Wages Losses     | Rental Income Loss |                    |
| Ventura             | 9,119                  | 113,736                 | 58,931               | 7,165            | 0.08         | 1,110            | 1,526                | 1,738            | 1,545              | 194,870            |
| Orange              | 4,635,160              | 19,414,715              | 7,818,509            | 725,472          | 4.45         | 2,300,050        | 1,358,310            | 1,635,443        | 1,142,571          | 39,030,230         |
| San Diego           | 318,587                | 2,640,777               | 1,305,583            | 95,204           | 0.52         | 108,379          | 32,930               | 71,932           | 68,040             | 4,641,432          |
| Los Angeles         | 12,283,436             | 45,110,625              | 19,596,048           | 2,128,964        | 3.78         | 5,915,385        | 3,397,462            | 4,424,032        | 3,311,284          | 96,167,235         |
| <b>Total</b>        | <b>19,948,622</b>      | <b>82,333,911</b>       | <b>35,259,983</b>    | <b>3,559,153</b> | <b>1.08</b>  | <b>9,513,330</b> | <b>5,231,904</b>     | <b>6,656,048</b> | <b>5,137,938</b>   | <b>167,640,888</b> |
| <b>Region Total</b> | <b>19,948,622</b>      | <b>82,333,911</b>       | <b>35,259,983</b>    | <b>3,559,153</b> | <b>1.08</b>  | <b>9,513,330</b> | <b>5,231,904</b>     | <b>6,656,048</b> | <b>5,137,938</b>   | <b>167,640,888</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 22, 2024

All values are in thousands of dollars

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

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

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

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

May 22, 2024

All values are in thousands of dollars

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

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

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

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**Potable Water**

**Waste Water**

**Oil Systems**

**Natural Gas**

**Electric Power**

**Communication**

**Total**

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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.*

## Hazus Quick Assessment Report

### Estimated Economic Loss (\$ Billions)

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

### Preliminary Damage Assessment (PDA) Estimates

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

### Estimated Casualties : Night Time

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

### Estimated Shelter Needs

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

Comments :

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

#### Disclaimer:

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

### Earthquake Information

Location :

Origin Time:

Magnitude : 7.77

Epicenter Latitude/Longitude :  
/

Depth & Type : /U

Name :  
NA

Ground Motion /Attenuation :

Maximum PGA: 1.00

Information Sources:

Comments :

### Population and Building Exposure

Population: 24,407,523

### Building Exposure : (\$ Millions)

|             |         |
|-------------|---------|
| Residential |         |
| Commercial  | 825,275 |
| Other       | 615,836 |
| Total       |         |

Counties : See Appendix

Major Metro Area :

## Hazus Quick Assessment Report

### Estimated Economic Loss (\$ Billions)

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

### Preliminary Damage Assessment (PDA) Estimates

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

### Estimated Casualties : Day Time

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

### Estimated Shelter Needs

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

Comments :

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

**Disclaimer:**

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

### Earthquake Information

Location :

Origin Time:

Magnitude : 7.77

Epicenter Latitude/Longitude :  
/

Depth & Type : /U

Name :  
NA

Ground Motion /Attenuation :

Maximum PGA: 1.00

Information Sources:

Comments :

### Population and Building Exposure

Population: 24,407,523

### Building Exposure : (\$ Millions)

|             |         |
|-------------|---------|
| Residential |         |
| Commercial  | 825,275 |
| Other       | 615,836 |
| Total       |         |

Counties : See Appendix

Major Metro Area :

## Hazus Quick Assessment Report

### Estimated Economic Loss (\$ Billions)

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

### Preliminary Damage Assessment (PDA) Estimates

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

### Estimated Casualties : Commute Time

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

### Estimated Shelter Needs

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

Comments :

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

**Disclaimer:**

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

### Earthquake Information

Location :

Origin Time:

Magnitude : 7.77

Epicenter Latitude/Longitude :  
/

Depth & Type : /U

Name :  
NA

Ground Motion /Attenuation :

Maximum PGA: 1.00

Information Sources:

Comments :

### Population and Building Exposure

Population: 24,407,523

### Building Exposure : (\$ Millions)

|             |         |
|-------------|---------|
| Residential |         |
| Commercial  | 825,275 |
| Other       | 615,836 |
| Total       |         |

Counties : See Appendix

Major Metro Area :

## Shelter Summary Report

May 22, 2024

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

## Building Damage by Count by General Occupancy

April 19, 2024

|                          | # of Buildings |        |          |           |          | Total  |
|--------------------------|----------------|--------|----------|-----------|----------|--------|
|                          | None           | Slight | Moderate | Extensive | Complete |        |
| <b>California</b>        |                |        |          |           |          |        |
| <b>Imperial</b>          |                |        |          |           |          |        |
| <i>Agriculture</i>       | 109            | 24     | 5        | 0         | 0        | 138    |
| <i>Commercial</i>        | 2,846          | 676    | 121      | 3         | 0        | 3,646  |
| <i>Education</i>         | 92             | 7      | 0        | 0         | 0        | 99     |
| <i>Government</i>        | 170            | 25     | 6        | 0         | 0        | 202    |
| <i>Industrial</i>        | 428            | 124    | 28       | 1         | 0        | 580    |
| <i>Religion</i>          | 238            | 48     | 8        | 0         | 0        | 295    |
| <i>Other Residential</i> | 4,663          | 1,499  | 1,098    | 253       | 6        | 7,518  |
| <i>Single Family</i>     | 29,905         | 5,416  | 84       | 0         | 0        | 35,405 |
| <b>Inyo</b>              |                |        |          |           |          |        |
| <i>Agriculture</i>       | 32             | 0      | 0        | 0         | 0        | 32     |
| <i>Commercial</i>        | 721            | 0      | 0        | 0         | 0        | 721    |
| <i>Education</i>         | 41             | 0      | 0        | 0         | 0        | 41     |
| <i>Government</i>        | 101            | 0      | 0        | 0         | 0        | 101    |
| <i>Industrial</i>        | 257            | 0      | 0        | 0         | 0        | 257    |
| <i>Religion</i>          | 57             | 0      | 0        | 0         | 0        | 57     |
| <i>Other Residential</i> | 4,050          | 0      | 0        | 0         | 0        | 4,050  |
| <i>Single Family</i>     | 4,446          | 0      | 0        | 0         | 0        | 4,446  |
| <b>Kern</b>              |                |        |          |           |          |        |

|                          | # of Buildings |        |          |           |          | Total     |
|--------------------------|----------------|--------|----------|-----------|----------|-----------|
|                          | None           | Slight | Moderate | Extensive | Complete |           |
| <i>Agriculture</i>       | 4,644          | 1      | 0        | 0         | 0        | 4,645     |
| <i>Commercial</i>        | 15,563         | 4      | 0        | 0         | 0        | 15,567    |
| <i>Education</i>         | 462            | 0      | 0        | 0         | 0        | 462       |
| <i>Government</i>        | 443            | 0      | 0        | 0         | 0        | 443       |
| <i>Industrial</i>        | 6,045          | 1      | 0        | 0         | 0        | 6,047     |
| <i>Religion</i>          | 1,523          | 1      | 0        | 0         | 0        | 1,524     |
| <i>Other Residential</i> | 54,478         | 40     | 1        | 0         | 0        | 54,520    |
| <i>Single Family</i>     | 205,134        | 5      | 0        | 0         | 0        | 205,139   |
| <b>Los Angeles</b>       |                |        |          |           |          |           |
| <i>Agriculture</i>       | 1,851          | 132    | 43       | 6         | 0        | 2,032     |
| <i>Commercial</i>        | 168,673        | 17,551 | 4,286    | 341       | 10       | 190,861   |
| <i>Education</i>         | 5,238          | 196    | 49       | 3         | 0        | 5,486     |
| <i>Government</i>        | 2,640          | 308    | 77       | 6         | 0        | 3,031     |
| <i>Industrial</i>        | 46,618         | 4,805  | 1,510    | 185       | 7        | 53,126    |
| <i>Religion</i>          | 9,168          | 1,148  | 308      | 26        | 1        | 10,651    |
| <i>Other Residential</i> | 444,217        | 31,787 | 5,210    | 447       | 9        | 481,671   |
| <i>Single Family</i>     | 1,705,171      | 95,779 | 2,137    | 51        | 2        | 1,803,140 |
| <b>Orange</b>            |                |        |          |           |          |           |
| <i>Agriculture</i>       | 627            | 328    | 143      | 29        | 7        | 1,135     |
| <i>Commercial</i>        | 39,622         | 19,894 | 7,242    | 1,262     | 320      | 68,340    |
| <i>Education</i>         | 1,539          | 286    | 53       | 8         | 4        | 1,890     |
| <i>Government</i>        | 355            | 192    | 90       | 11        | 2        | 650       |
| <i>Industrial</i>        | 10,106         | 5,753  | 2,536    | 343       | 58       | 18,795    |
| <i>Religion</i>          | 1,137          | 606    | 249      | 51        | 14       | 2,057     |
| <i>Other Residential</i> | 47,212         | 22,028 | 12,746   | 3,563     | 169      | 85,718    |

|                          | # of Buildings |         |          |           |          | Total   |
|--------------------------|----------------|---------|----------|-----------|----------|---------|
|                          | None           | Slight  | Moderate | Extensive | Complete |         |
| <i>Single Family</i>     | 499,281        | 197,932 | 8,765    | 170       | 64       | 706,212 |
| <b>Riverside</b>         |                |         |          |           |          |         |
| <i>Agriculture</i>       | 1,293          | 324     | 84       | 10        | 2        | 1,713   |
| <i>Commercial</i>        | 28,592         | 11,990  | 4,859    | 769       | 147      | 46,357  |
| <i>Education</i>         | 677            | 238     | 68       | 6         | 1        | 990     |
| <i>Government</i>        | 5,621          | 989     | 476      | 80        | 8        | 7,175   |
| <i>Industrial</i>        | 3,532          | 2,051   | 730      | 86        | 10       | 6,409   |
| <i>Religion</i>          | 798            | 344     | 144      | 27        | 5        | 1,319   |
| <i>Other Residential</i> | 55,949         | 28,790  | 25,270   | 9,240     | 3,550    | 122,799 |
| <i>Single Family</i>     | 374,626        | 193,689 | 35,872   | 1,080     | 188      | 605,455 |
| <b>San Bernardino</b>    |                |         |          |           |          |         |
| <i>Agriculture</i>       | 1,123          | 514     | 145      | 24        | 9        | 1,815   |
| <i>Commercial</i>        | 32,332         | 6,278   | 1,257    | 155       | 19       | 40,041  |
| <i>Education</i>         | 904            | 72      | 9        | 0         | 0        | 985     |
| <i>Government</i>        | 1,036          | 172     | 29       | 1         | 0        | 1,238   |
| <i>Industrial</i>        | 7,448          | 1,613   | 372      | 37        | 4        | 9,474   |
| <i>Religion</i>          | 1,916          | 325     | 70       | 8         | 1        | 2,320   |
| <i>Other Residential</i> | 77,388         | 14,543  | 5,846    | 1,008     | 36       | 98,821  |
| <i>Single Family</i>     | 451,683        | 71,377  | 2,200    | 92        | 14       | 525,367 |
| <b>San Diego</b>         |                |         |          |           |          |         |
| <i>Agriculture</i>       | 1,769          | 344     | 68       | 9         | 1        | 2,190   |
| <i>Commercial</i>        | 56,903         | 4,854   | 570      | 37        | 4        | 62,369  |
| <i>Education</i>         | 1,858          | 67      | 7        | 0         | 0        | 1,932   |
| <i>Government</i>        | 17,168         | 2,962   | 752      | 41        | 0        | 20,924  |
| <i>Industrial</i>        | 13,005         | 1,157   | 143      | 8         | 0        | 14,313  |

|                          | # of Buildings |        |          |           |          | Total   |
|--------------------------|----------------|--------|----------|-----------|----------|---------|
|                          | None           | Slight | Moderate | Extensive | Complete |         |
| <i>Religion</i>          | 2,735          | 277    | 48       | 3         | 0        | 3,063   |
| <i>Other Residential</i> | 103,494        | 15,989 | 6,907    | 1,116     | 53       | 127,559 |
| <i>Single Family</i>     | 703,086        | 57,834 | 1,954    | 127       | 19       | 763,020 |
| <b>San Luis Obispo</b>   |                |        |          |           |          |         |
| <i>Agriculture</i>       | 421            | 0      | 0        | 0         | 0        | 421     |
| <i>Commercial</i>        | 9,375          | 0      | 0        | 0         | 0        | 9,375   |
| <i>Education</i>         | 182            | 0      | 0        | 0         | 0        | 182     |
| <i>Government</i>        | 185            | 0      | 0        | 0         | 0        | 185     |
| <i>Industrial</i>        | 2,556          | 0      | 0        | 0         | 0        | 2,556   |
| <i>Religion</i>          | 360            | 0      | 0        | 0         | 0        | 360     |
| <i>Other Residential</i> | 20,216         | 0      | 0        | 0         | 0        | 20,216  |
| <i>Single Family</i>     | 85,639         | 0      | 0        | 0         | 0        | 85,639  |
| <b>Santa Barbara</b>     |                |        |          |           |          |         |
| <i>Agriculture</i>       | 464            | 0      | 0        | 0         | 0        | 464     |
| <i>Commercial</i>        | 9,820          | 0      | 0        | 0         | 0        | 9,820   |
| <i>Education</i>         | 299            | 0      | 0        | 0         | 0        | 299     |
| <i>Government</i>        | 239            | 0      | 0        | 0         | 0        | 239     |
| <i>Industrial</i>        | 2,840          | 0      | 0        | 0         | 0        | 2,840   |
| <i>Religion</i>          | 621            | 0      | 0        | 0         | 0        | 621     |
| <i>Other Residential</i> | 24,110         | 1      | 0        | 0         | 0        | 24,111  |
| <i>Single Family</i>     | 98,982         | 0      | 0        | 0         | 0        | 98,982  |
| <b>Ventura</b>           |                |        |          |           |          |         |
| <i>Agriculture</i>       | 597            | 1      | 0        | 0         | 0        | 598     |
| <i>Commercial</i>        | 14,928         | 24     | 1        | 0         | 0        | 14,953  |
| <i>Education</i>         | 497            | 0      | 0        | 0         | 0        | 497     |

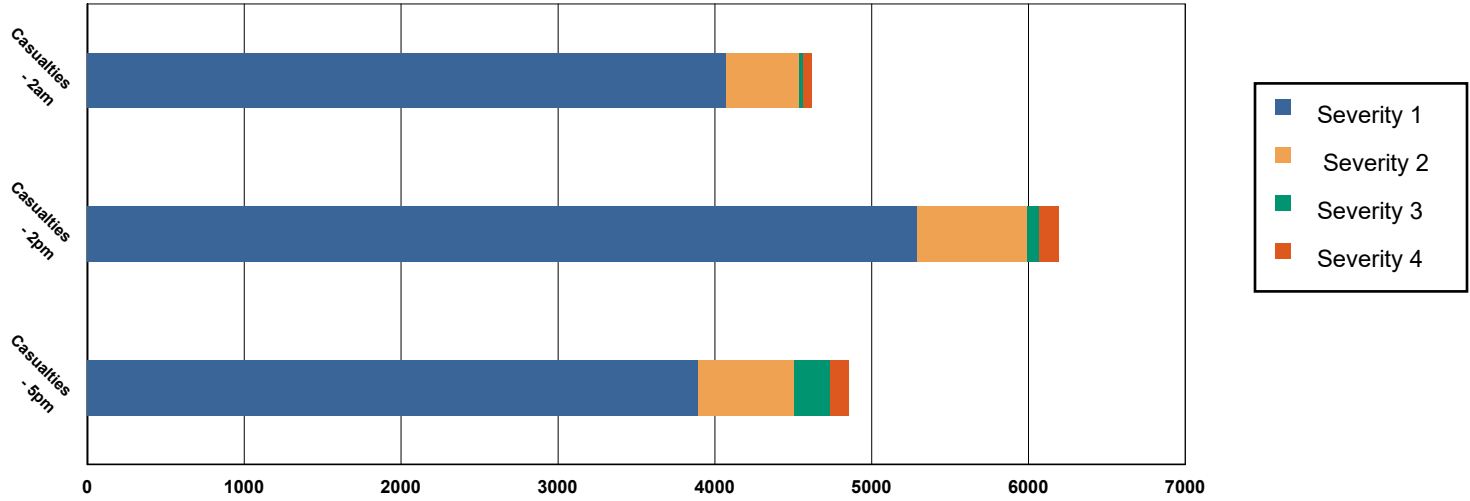
|                          | # of Buildings   |                |                |               |              | Total            |
|--------------------------|------------------|----------------|----------------|---------------|--------------|------------------|
|                          | None             | Slight         | Moderate       | Extensive     | Complete     |                  |
| <i>Government</i>        | 1,000            | 1              | 0              | 0             | 0            | 1,001            |
| <i>Industrial</i>        | 6,086            | 11             | 0              | 0             | 0            | 6,097            |
| <i>Religion</i>          | 1,186            | 1              | 0              | 0             | 0            | 1,187            |
| <i>Other Residential</i> | 26,091           | 69             | 3              | 0             | 0            | 26,163           |
| <i>Single Family</i>     | 203,868          | 100            | 0              | 0             | 0            | 203,968          |
| <b>Total</b>             | <b>5,775,405</b> | <b>823,596</b> | <b>134,683</b> | <b>20,725</b> | <b>4,744</b> | <b>6,759,152</b> |
| <b>Region Total</b>      | <b>5,775,405</b> | <b>823,596</b> | <b>134,683</b> | <b>20,725</b> | <b>4,744</b> | <b>6,759,152</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

April 19, 2024

### Region Total Casualties



### Injury Severity Level

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

#### California

##### Imperial

##### Casualties - 2am

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

##### Casualties - 2pm

|                   |    |   |   |   |    |
|-------------------|----|---|---|---|----|
| Educational       | 3  | 0 | 0 | 0 | 3  |
| Industrial        | 1  | 0 | 0 | 0 | 1  |
| Hotels            | 0  | 0 | 0 | 0 | 0  |
| Other-Residential | 4  | 0 | 0 | 0 | 4  |
| Single Family     | 3  | 0 | 0 | 0 | 3  |
| Commercial        | 16 | 1 | 0 | 0 | 18 |
| Commuting         | 0  | 0 | 0 | 0 | 0  |

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

|                               | Injury Severity Level |            |            |            | Total      |
|-------------------------------|-----------------------|------------|------------|------------|------------|
|                               | Severity 1            | Severity 2 | Severity 3 | Severity 4 |            |
| <b>California</b>             |                       |            |            |            |            |
| <b>Kern</b>                   |                       |            |            |            |            |
| <b>Casualties - 2am</b>       |                       |            |            |            |            |
| <i>Commuting</i>              | 0                     | 0          | 0          | 0          | 0          |
| <i>Educational</i>            | 0                     | 0          | 0          | 0          | 0          |
| <i>Single Family</i>          | 0                     | 0          | 0          | 0          | 0          |
| <i>Other-Residential</i>      | 0                     | 0          | 0          | 0          | 0          |
| <i>Hotels</i>                 | 0                     | 0          | 0          | 0          | 0          |
| <i>Industrial</i>             | 0                     | 0          | 0          | 0          | 0          |
| <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>Educational</i>            | 0                     | 0          | 0          | 0          | 0          |
| <i>Commuting</i>              | 0                     | 0          | 0          | 0          | 0          |
| <i>Single Family</i>          | 0                     | 0          | 0          | 0          | 0          |
| <i>Hotels</i>                 | 0                     | 0          | 0          | 0          | 0          |
| <i>Other-Residential</i>      | 0                     | 0          | 0          | 0          | 0          |
| <i>Commercial</i>             | 0                     | 0          | 0          | 0          | 0          |
| <i>Industrial</i>             | 0                     | 0          | 0          | 0          | 0          |
| <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>Single Family</i>          | 0                     | 0          | 0          | 0          | 0          |
| <i>Commercial</i>             | 0                     | 0          | 0          | 0          | 0          |
| <i>Other-Residential</i>      | 0                     | 0          | 0          | 0          | 0          |
| <i>Commuting</i>              | 0                     | 0          | 0          | 0          | 0          |
| <i>Educational</i>            | 0                     | 0          | 0          | 0          | 0          |
| <i>Hotels</i>                 | 0                     | 0          | 0          | 0          | 0          |
| <i>Industrial</i>             | 0                     | 0          | 0          | 0          | 0          |
| <b>Total Casualties - 5pm</b> | <b>0</b>              | <b>0</b>   | <b>0</b>   | <b>0</b>   | <b>0</b>   |
| <b>Los Angeles</b>            |                       |            |            |            |            |
| <b>Casualties - 2am</b>       |                       |            |            |            |            |
| <i>Hotels</i>                 | 0                     | 0          | 0          | 0          | 1          |
| <i>Industrial</i>             | 8                     | 1          | 0          | 0          | 8          |
| <i>Educational</i>            | 0                     | 0          | 0          | 0          | 0          |
| <i>Single Family</i>          | 181                   | 2          | 0          | 0          | 184        |
| <i>Commuting</i>              | 0                     | 0          | 0          | 0          | 0          |
| <i>Other-Residential</i>      | 315                   | 20         | 0          | 1          | 336        |
| <i>Commercial</i>             | 7                     | 1          | 0          | 0          | 7          |
| <b>Total Casualties - 2am</b> | <b>511</b>            | <b>24</b>  | <b>1</b>   | <b>1</b>   | <b>537</b> |
| <b>Casualties - 2pm</b>       |                       |            |            |            |            |
| <i>Industrial</i>             | 56                    | 5          | 0          | 0          | 62         |
| <i>Other-Residential</i>      | 96                    | 6          | 0          | 0          | 103        |
| <i>Commercial</i>             | 439                   | 35         | 1          | 2          | 477        |
| <i>Commuting</i>              | 0                     | 0          | 0          | 0          | 1          |
| <i>Educational</i>            | 242                   | 25         | 1          | 2          | 270        |

|                               | Injury Severity Level |            |            |            | Total        |
|-------------------------------|-----------------------|------------|------------|------------|--------------|
|                               | Severity 1            | Severity 2 | Severity 3 | Severity 4 |              |
| <b>California</b>             |                       |            |            |            |              |
| <b>Los Angeles</b>            |                       |            |            |            |              |
| <b>Casualties - 2pm</b>       |                       |            |            |            |              |
| Single Family                 | 49                    | 1          | 0          | 0          | 50           |
| Hotels                        | 0                     | 0          | 0          | 0          | 0            |
| <b>Total Casualties - 2pm</b> | <b>883</b>            | <b>72</b>  | <b>3</b>   | <b>5</b>   | <b>962</b>   |
| <b>Casualties - 5pm</b>       |                       |            |            |            |              |
| Other-Residential             | 118                   | 8          | 0          | 0          | 126          |
| Industrial                    | 35                    | 3          | 0          | 0          | 39           |
| Commuting                     | 3                     | 4          | 8          | 1          | 17           |
| Single Family                 | 65                    | 1          | 0          | 0          | 66           |
| Commercial                    | 305                   | 25         | 1          | 1          | 332          |
| Hotels                        | 0                     | 0          | 0          | 0          | 0            |
| Educational                   | 78                    | 9          | 1          | 1          | 89           |
| <b>Total Casualties - 5pm</b> | <b>605</b>            | <b>50</b>  | <b>9</b>   | <b>4</b>   | <b>668</b>   |
| <b>Orange</b>                 |                       |            |            |            |              |
| <b>Casualties - 2am</b>       |                       |            |            |            |              |
| Hotels                        | 1                     | 0          | 0          | 0          | 1            |
| Commuting                     | 0                     | 0          | 0          | 0          | 0            |
| Educational                   | 0                     | 0          | 0          | 0          | 0            |
| Industrial                    | 24                    | 4          | 0          | 1          | 30           |
| Other-Residential             | 580                   | 85         | 8          | 16         | 689          |
| Commercial                    | 15                    | 3          | 0          | 1          | 19           |
| Single Family                 | 441                   | 23         | 2          | 4          | 470          |
| <b>Total Casualties - 2am</b> | <b>1,061</b>          | <b>115</b> | <b>11</b>  | <b>22</b>  | <b>1,209</b> |
| <b>Casualties - 2pm</b>       |                       |            |            |            |              |
| Industrial                    | 178                   | 30         | 3          | 6          | 218          |
| Other-Residential             | 164                   | 25         | 2          | 5          | 196          |
| Commuting                     | 1                     | 1          | 2          | 0          | 4            |
| Commercial                    | 1,036                 | 190        | 24         | 47         | 1,297        |
| Single Family                 | 120                   | 7          | 1          | 1          | 129          |
| Hotels                        | 0                     | 0          | 0          | 0          | 0            |
| Educational                   | 407                   | 65         | 7          | 14         | 493          |
| <b>Total Casualties - 2pm</b> | <b>1,906</b>          | <b>318</b> | <b>40</b>  | <b>74</b>  | <b>2,337</b> |
| <b>Casualties - 5pm</b>       |                       |            |            |            |              |
| Hotels                        | 0                     | 0          | 0          | 0          | 0            |
| Educational                   | 75                    | 9          | 1          | 1          | 85           |
| Commuting                     | 17                    | 22         | 37         | 7          | 83           |
| Single Family                 | 161                   | 9          | 1          | 2          | 173          |
| Commercial                    | 749                   | 141        | 18         | 35         | 944          |
| Other-Residential             | 215                   | 33         | 3          | 6          | 257          |
| Industrial                    | 111                   | 19         | 2          | 4          | 136          |
| <b>Total Casualties - 5pm</b> | <b>1,328</b>          | <b>232</b> | <b>63</b>  | <b>55</b>  | <b>1,679</b> |

## Injury Severity Level

Severity 1      Severity 2      Severity 3      Severity 4      Total

### California

#### Riverside

##### Casualties - 2am

|                               | Severity 1   | Severity 2 | Severity 3 | Severity 4 | Total        |
|-------------------------------|--------------|------------|------------|------------|--------------|
| <i>Industrial</i>             | 8            | 1          | 0          | 0          | 10           |
| <i>Commercial</i>             | 9            | 2          | 0          | 0          | 11           |
| <i>Other-Residential</i>      | 1,206        | 223        | 12         | 21         | 1,461        |
| <i>Educational</i>            | 0            | 0          | 0          | 0          | 0            |
| <i>Commuting</i>              | 0            | 1          | 1          | 0          | 2            |
| <i>Single Family</i>          | 696          | 60         | 4          | 7          | 766          |
| <i>Hotels</i>                 | 0            | 0          | 0          | 0          | 0            |
| <b>Total Casualties - 2am</b> | <b>1,920</b> | <b>286</b> | <b>17</b>  | <b>28</b>  | <b>2,251</b> |

##### Casualties - 2pm

|                               |              |            |           |           |              |
|-------------------------------|--------------|------------|-----------|-----------|--------------|
| <i>Commercial</i>             | 647          | 103        | 10        | 20        | 781          |
| <i>Other-Residential</i>      | 358          | 65         | 4         | 6         | 433          |
| <i>Educational</i>            | 205          | 24         | 2         | 3         | 234          |
| <i>Single Family</i>          | 203          | 19         | 1         | 2         | 226          |
| <i>Commuting</i>              | 3            | 5          | 7         | 1         | 15           |
| <i>Hotels</i>                 | 0            | 0          | 0         | 0         | 0            |
| <i>Industrial</i>             | 62           | 9          | 1         | 1         | 73           |
| <b>Total Casualties - 2pm</b> | <b>1,478</b> | <b>225</b> | <b>25</b> | <b>35</b> | <b>1,762</b> |

##### Casualties - 5pm

|                               |              |            |            |           |              |
|-------------------------------|--------------|------------|------------|-----------|--------------|
| <i>Industrial</i>             | 39           | 5          | 0          | 1         | 46           |
| <i>Other-Residential</i>      | 432          | 80         | 5          | 8         | 524          |
| <i>Educational</i>            | 14           | 1          | 0          | 0         | 15           |
| <i>Single Family</i>          | 260          | 23         | 2          | 3         | 288          |
| <i>Hotels</i>                 | 0            | 0          | 0          | 0         | 0            |
| <i>Commercial</i>             | 464          | 73         | 7          | 14        | 558          |
| <i>Commuting</i>              | 53           | 83         | 125        | 25        | 286          |
| <b>Total Casualties - 5pm</b> | <b>1,262</b> | <b>265</b> | <b>139</b> | <b>50</b> | <b>1,717</b> |

#### San Bernardino

##### Casualties - 2am

|                               |            |           |          |          |            |
|-------------------------------|------------|-----------|----------|----------|------------|
| <i>Hotels</i>                 | 0          | 0         | 0        | 0        | 0          |
| <i>Single Family</i>          | 143        | 5         | 0        | 1        | 149        |
| <i>Commercial</i>             | 2          | 0         | 0        | 0        | 3          |
| <i>Commuting</i>              | 0          | 0         | 0        | 0        | 0          |
| <i>Educational</i>            | 0          | 0         | 0        | 0        | 0          |
| <i>Other-Residential</i>      | 166        | 16        | 1        | 1        | 184        |
| <i>Industrial</i>             | 3          | 0         | 0        | 0        | 3          |
| <b>Total Casualties - 2am</b> | <b>314</b> | <b>22</b> | <b>1</b> | <b>2</b> | <b>339</b> |

##### Casualties - 2pm

|                          |    |   |   |   |    |
|--------------------------|----|---|---|---|----|
| <i>Industrial</i>        | 20 | 2 | 0 | 0 | 23 |
| <i>Hotels</i>            | 0  | 0 | 0 | 0 | 0  |
| <i>Commuting</i>         | 0  | 0 | 0 | 0 | 1  |
| <i>Other-Residential</i> | 46 | 5 | 0 | 0 | 51 |

## Injury Severity Level

Severity 1      Severity 2      Severity 3      Severity 4      Total

### California

#### San Bernardino

##### Casualties - 2pm

|                               |            |           |          |          |            |
|-------------------------------|------------|-----------|----------|----------|------------|
| <i>Educational</i>            | 42         | 3         | 0        | 0        | 44         |
| <i>Single Family</i>          | 38         | 1         | 0        | 0        | 40         |
| <i>Commercial</i>             | 163        | 20        | 2        | 3        | 187        |
| <b>Total Casualties - 2pm</b> | <b>308</b> | <b>31</b> | <b>3</b> | <b>4</b> | <b>346</b> |

##### Casualties - 5pm

|                               |            |           |           |          |            |
|-------------------------------|------------|-----------|-----------|----------|------------|
| <i>Other-Residential</i>      | 60         | 6         | 0         | 0        | 67         |
| <i>Commercial</i>             | 118        | 14        | 1         | 2        | 136        |
| <i>Single Family</i>          | 52         | 2         | 0         | 0        | 55         |
| <i>Educational</i>            | 5          | 0         | 0         | 0        | 5          |
| <i>Hotels</i>                 | 0          | 0         | 0         | 0        | 0          |
| <i>Commuting</i>              | 3          | 5         | 8         | 2        | 17         |
| <i>Industrial</i>             | 12         | 1         | 0         | 0        | 14         |
| <b>Total Casualties - 5pm</b> | <b>250</b> | <b>29</b> | <b>10</b> | <b>5</b> | <b>294</b> |

#### San Diego

##### Casualties - 2am

|                               |            |           |          |          |            |
|-------------------------------|------------|-----------|----------|----------|------------|
| <i>Commercial</i>             | 9          | 1         | 0        | 0        | 10         |
| <i>Other-Residential</i>      | 127        | 11        | 0        | 0        | 139        |
| <i>Commuting</i>              | 0          | 0         | 0        | 0        | 0          |
| <i>Educational</i>            | 0          | 0         | 0        | 0        | 0          |
| <i>Single Family</i>          | 102        | 3         | 0        | 0        | 106        |
| <i>Industrial</i>             | 1          | 0         | 0        | 0        | 1          |
| <i>Hotels</i>                 | 0          | 0         | 0        | 0        | 0          |
| <b>Total Casualties - 2am</b> | <b>240</b> | <b>15</b> | <b>1</b> | <b>1</b> | <b>257</b> |

##### Casualties - 2pm

|                               |            |           |          |          |            |
|-------------------------------|------------|-----------|----------|----------|------------|
| <i>Hotels</i>                 | 0          | 0         | 0        | 0        | 0          |
| <i>Educational</i>            | 32         | 2         | 0        | 0        | 34         |
| <i>Commuting</i>              | 0          | 0         | 0        | 0        | 0          |
| <i>Commercial</i>             | 574        | 47        | 2        | 4        | 627        |
| <i>Other-Residential</i>      | 43         | 4         | 0        | 0        | 47         |
| <i>Single Family</i>          | 33         | 1         | 0        | 0        | 34         |
| <i>Industrial</i>             | 10         | 1         | 0        | 0        | 10         |
| <b>Total Casualties - 2pm</b> | <b>691</b> | <b>55</b> | <b>2</b> | <b>4</b> | <b>753</b> |

##### Casualties - 5pm

|                          |     |    |   |   |     |
|--------------------------|-----|----|---|---|-----|
| <i>Other-Residential</i> | 45  | 4  | 0 | 0 | 49  |
| <i>Commercial</i>        | 334 | 27 | 1 | 2 | 364 |
| <i>Commuting</i>         | 2   | 2  | 4 | 1 | 9   |
| <i>Single Family</i>     | 37  | 1  | 0 | 0 | 39  |
| <i>Educational</i>       | 6   | 0  | 0 | 0 | 6   |
| <i>Hotels</i>            | 0   | 0  | 0 | 0 | 0   |
| <i>Industrial</i>        | 6   | 0  | 0 | 0 | 6   |

### Injury Severity Level

Severity 1      Severity 2      Severity 3      Severity 4      Total

**California**

**San Diego**

**Total Casualties - 5pm**      429      35      5      3      473

**San Luis Obispo**

**Casualties - 2am**

*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

*Commuting*      0      0      0      0      0

*Educational*      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

*Educational*      0      0      0      0      0

*Other-Residential*      0      0      0      0      0

*Hotels*      0      0      0      0      0

*Commuting*      0      0      0      0      0

*Commercial*      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

*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

**Santa Barbara**

**Casualties - 2am**

*Industrial*      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

*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

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



April 19, 2024

All values are in thousands of tons.

|                     | Brick, Wood & Others | Concrete & Steel | Total        |
|---------------------|----------------------|------------------|--------------|
| <b>California</b>   |                      |                  |              |
| San Luis Obispo     | 0                    | 0                | 0            |
| Inyo                | 0                    | 0                | 0            |
| Riverside           | 1,166                | 824              | 1,990        |
| San Bernardino      | 326                  | 209              | 536          |
| Imperial            | 24                   | 28               | 52           |
| Ventura             | 1                    | 0                | 1            |
| Kern                | 0                    | 0                | 0            |
| Orange              | 680                  | 1,211            | 1,891        |
| San Diego           | 175                  | 132              | 308          |
| Los Angeles         | 548                  | 550              | 1,098        |
| Santa Barbara       | 0                    | 0                | 0            |
| <b>Total</b>        | <b>2,920</b>         | <b>2,954</b>     | <b>5,874</b> |
| <b>Region Total</b> | <b>2,920</b>         | <b>2,954</b>     | <b>5,874</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 Losses For Buildings

April 19, 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> |                        |                         |                      |                |              |                 |                      |              |                    |            |
| Inyo              | 0                      | 0                       | 0                    | 0              | 0.00         | 0               | 0                    | 0            | 0                  | 1          |
| Imperial          | 54,791                 | 263,760                 | 127,610              | 35,728         | 0.95         | 13,996          | 8,354                | 8,836        | 7,037              | 520,112    |
| San Bernardino    | 536,137                | 3,113,442               | 1,543,127            | 230,070        | 0.97         | 171,355         | 73,032               | 100,437      | 126,977            | 5,894,576  |
| Riverside         | 1,769,018              | 9,974,706               | 4,028,240            | 243,092        | 2.80         | 842,137         | 302,677              | 340,929      | 395,596            | 17,896,396 |
| San Luis Obispo   | 0                      | 0                       | 0                    | 0              | 0.00         | 0               | 0                    | 0            | 0                  | 0          |
| Santa Barbara     | 4                      | 162                     | 115                  | 25             | 0.00         | 0               | 0                    | 0            | 1                  | 308        |
| Kern              | 91                     | 2,032                   | 1,187                | 172            | 0.00         | 11              | 12                   | 14           | 19                 | 3,537      |
| Ventura           | 587                    | 10,744                  | 5,349                | 718            | 0.01         | 44              | 88                   | 103          | 114                | 17,748     |
| Orange            | 1,594,325              | 8,062,999               | 3,639,548            | 305,974        | 1.79         | 624,564         | 431,731              | 503,953      | 383,418            | 15,546,513 |

|                     | 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 |                   |
| San Diego           | 319,375                | 2,612,220               | 1,283,294            | 93,467           | 0.52         | 109,802          | 32,615               | 72,066           | 68,347             | 4,591,184         |
| Los Angeles         | 881,973                | 4,820,796               | 2,511,377            | 257,394          | 0.38         | 393,556          | 215,572              | 283,028          | 254,263            | 9,617,957         |
| <b>Total</b>        | <b>5,156,302</b>       | <b>28,860,861</b>       | <b>13,139,846</b>    | <b>1,166,640</b> | <b>0.67</b>  | <b>2,155,465</b> | <b>1,064,080</b>     | <b>1,309,364</b> | <b>1,235,773</b>   | <b>54,088,331</b> |
| <b>Region Total</b> | <b>5,156,302</b>       | <b>28,860,861</b>       | <b>13,139,846</b>    | <b>1,166,640</b> | <b>0.67</b>  | <b>2,155,465</b> | <b>1,064,080</b>     | <b>1,309,364</b> | <b>1,235,773</b>   | <b>54,088,331</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

April 19, 2024

All values are in thousands of dollars

|                   | Highway      | Railway      | Light Rail | Bus Facility | Ports    | Ferries  | Airport      | Total         |
|-------------------|--------------|--------------|------------|--------------|----------|----------|--------------|---------------|
| <b>California</b> |              |              |            |              |          |          |              |               |
| <b>Imperial</b>   |              |              |            |              |          |          |              |               |
| Segments          | 0            | 0            | 0          |              |          |          |              | 0             |
| Bridges           | 8,935        | 5,803        | 0          |              |          |          |              | 14,738        |
| Tunnels           | 0            | 0            | 0          |              |          |          |              | 0             |
| Facilities        |              | 884          | 0          | 0            | 0        | 0        | 5,126        | 6,010         |
| <b>Total</b>      | <b>8,935</b> | <b>6,688</b> | <b>0</b>   | <b>0</b>     | <b>0</b> | <b>0</b> | <b>5,126</b> | <b>20,749</b> |
| <b>Inyo</b>       |              |              |            |              |          |          |              |               |
| Segments          | 0            | 0            | 0          |              |          |          |              | 0             |
| Bridges           | 0            | 0            | 0          |              |          |          |              | 0             |
| Tunnels           | 0            | 0            | 0          |              |          |          |              | 0             |
| Facilities        |              | 0            | 0          | 0            | 0        | 0        | 57           | 57            |
| <b>Total</b>      | <b>0</b>     | <b>0</b>     | <b>0</b>   | <b>0</b>     | <b>0</b> | <b>0</b> | <b>57</b>    | <b>57</b>     |
| <b>Kern</b>       |              |              |            |              |          |          |              |               |
| Segments          | 0            | 0            | 0          |              |          |          |              | 0             |
| Bridges           | 19           | 0            | 0          |              |          |          |              | 19            |
| Tunnels           | 0            | 0            | 0          |              |          |          |              | 0             |
| Facilities        |              | 88           | 0          | 46           | 0        | 0        | 667          | 801           |

|                       | Highway        | Railway       | Light Rail     | Bus Facility | Ports         | Ferries    | Airport        | Total          |
|-----------------------|----------------|---------------|----------------|--------------|---------------|------------|----------------|----------------|
| <b>Total</b>          | <b>19</b>      | <b>88</b>     | <b>0</b>       | <b>46</b>    | <b>0</b>      | <b>0</b>   | <b>667</b>     | <b>820</b>     |
| <b>Los Angeles</b>    |                |               |                |              |               |            |                |                |
| <i>Segments</i>       | 0              | 0             | 0              |              |               |            |                | 0              |
| <i>Bridges</i>        | 63,603         | 825           | 1              |              |               |            |                | 64,430         |
| <i>Tunnels</i>        | 100            | 0             | 0              |              |               |            |                | 100            |
| <i>Facilities</i>     |                | 10,021        | 157,476        | 2,253        | 51,787        | 872        | 119,992        | 342,400        |
| <b>Total</b>          | <b>63,703</b>  | <b>10,846</b> | <b>157,478</b> | <b>2,253</b> | <b>51,787</b> | <b>872</b> | <b>119,992</b> | <b>406,930</b> |
| <b>Orange</b>         |                |               |                |              |               |            |                |                |
| <i>Segments</i>       | 0              | 0             | 0              |              |               |            |                | 0              |
| <i>Bridges</i>        | 132,926        | 4,489         | 0              |              |               |            |                | 137,415        |
| <i>Tunnels</i>        | 805            | 0             | 0              |              |               |            |                | 805            |
| <i>Facilities</i>     |                | 3,055         | 0              | 0            | 6,750         | 589        | 62,267         | 72,661         |
| <b>Total</b>          | <b>133,731</b> | <b>7,544</b>  | <b>0</b>       | <b>0</b>     | <b>6,750</b>  | <b>589</b> | <b>62,267</b>  | <b>210,881</b> |
| <b>Riverside</b>      |                |               |                |              |               |            |                |                |
| <i>Segments</i>       | 0              | 0             | 0              |              |               |            |                | 0              |
| <i>Bridges</i>        | 235,352        | 5,364         | 0              |              |               |            |                | 240,716        |
| <i>Tunnels</i>        | 0              | 0             | 0              |              |               |            |                | 0              |
| <i>Facilities</i>     |                | 2,408         | 0              | 3,490        | 0             | 0          | 23,213         | 29,111         |
| <b>Total</b>          | <b>235,352</b> | <b>7,772</b>  | <b>0</b>       | <b>3,490</b> | <b>0</b>      | <b>0</b>   | <b>23,213</b>  | <b>269,827</b> |
| <b>San Bernardino</b> |                |               |                |              |               |            |                |                |
| <i>Segments</i>       | 0              | 0             | 0              |              |               |            |                | 0              |
| <i>Bridges</i>        | 32,647         | 1,265         | 0              |              |               |            |                | 33,912         |
| <i>Tunnels</i>        | 2              | 0             | 0              |              |               |            |                | 2              |
| <i>Facilities</i>     |                | 5,507         | 0              | 573          | 0             | 0          | 37,362         | 43,441         |

|                        | Highway       | Railway      | Light Rail    | Bus Facility | Ports         | Ferries    | Airport       | Total          |
|------------------------|---------------|--------------|---------------|--------------|---------------|------------|---------------|----------------|
| <b>Total</b>           | <b>32,649</b> | <b>6,772</b> | <b>0</b>      | <b>573</b>   | <b>0</b>      | <b>0</b>   | <b>37,362</b> | <b>77,355</b>  |
| <b>San Diego</b>       |               |              |               |              |               |            |               |                |
| Segments               | 0             | 0            | 0             |              |               |            |               | 0              |
| Bridges                | 12,133        | 1,038        | 0             |              |               |            |               | 13,171         |
| Tunnels                | 21            | 0            | 0             |              |               |            |               | 21             |
| Facilities             |               | 1,920        | 72,862        | 89           | 24,969        | 301        | 71,842        | 171,983        |
| <b>Total</b>           | <b>12,154</b> | <b>2,958</b> | <b>72,862</b> | <b>89</b>    | <b>24,969</b> | <b>301</b> | <b>71,842</b> | <b>185,175</b> |
| <b>San Luis Obispo</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>Santa Barbara</b>   |               |              |               |              |               |            |               |                |
| Segments               | 0             | 0            | 0             |              |               |            |               | 0              |
| Bridges                | 0             | 0            | 0             |              |               |            |               | 0              |
| Tunnels                | 0             | 0            | 0             |              |               |            |               | 0              |
| Facilities             |               | 77           | 0             | 2            | 135           | 14         | 387           | 615            |
| <b>Total</b>           | <b>0</b>      | <b>77</b>    | <b>0</b>      | <b>2</b>     | <b>135</b>    | <b>14</b>  | <b>387</b>    | <b>615</b>     |
| <b>Ventura</b>         |               |              |               |              |               |            |               |                |
| Segments               | 0             | 0            | 0             |              |               |            |               | 0              |
| Bridges                | 38            | 0            | 0             |              |               |            |               | 38             |
| Tunnels                | 0             | 0            | 0             |              |               |            |               | 0              |
| Facilities             |               | 128          | 0             | 21           | 697           | 26         | 566           | 1,438          |

|                     | Highway | Railway | Light Rail | Bus Facility | Ports  | Ferries | Airport | Total     |
|---------------------|---------|---------|------------|--------------|--------|---------|---------|-----------|
| <b>Total</b>        | 38      | 128     | 0          | 21           | 697    | 26      | 566     | 1,476     |
| <b>Total</b>        | 486,581 | 42,873  | 230,340    | 6,473        | 84,337 | 1,802   | 321,479 | 1,173,885 |
| <b>Region Total</b> | 486,581 | 42,873  | 230,340    | 6,473        | 84,337 | 1,802   | 321,479 | 1,173,885 |

*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 19, 2024

All values are in thousands of dollars

|                    | Potable Water | Waste Water    | Oil Systems | Natural Gas | Electric Power   | Communication | Total            |
|--------------------|---------------|----------------|-------------|-------------|------------------|---------------|------------------|
| <b>California</b>  |               |                |             |             |                  |               |                  |
| <b>Imperial</b>    |               |                |             |             |                  |               |                  |
| <i>Facilities</i>  | 2,018         | 126,036        | 0           | 0           | 1,885,437        | 155           | 2,013,647        |
| <i>Pipelines</i>   | 2,673         | 1,343          | 0           | 0           |                  |               | 4,015            |
| <b>Total</b>       | <b>4,690</b>  | <b>127,379</b> | <b>0</b>    | <b>0</b>    | <b>1,885,437</b> | <b>155</b>    | <b>2,017,662</b> |
| <b>Inyo</b>        |               |                |             |             |                  |               |                  |
| <i>Facilities</i>  | 0             | 0              | 0           | 0           | 316              | 0             | 316              |
| <i>Pipelines</i>   | 43            | 22             | 0           | 0           |                  |               | 65               |
| <b>Total</b>       | <b>43</b>     | <b>22</b>      | <b>0</b>    | <b>0</b>    | <b>316</b>       | <b>0</b>      | <b>380</b>       |
| <b>Kern</b>        |               |                |             |             |                  |               |                  |
| <i>Facilities</i>  | 85            | 248            | 1           | 6           | 71,637           | 5             | 71,983           |
| <i>Pipelines</i>   | 439           | 220            | 0           | 0           |                  |               | 659              |
| <b>Total</b>       | <b>524</b>    | <b>469</b>     | <b>1</b>    | <b>6</b>    | <b>71,637</b>    | <b>5</b>      | <b>72,642</b>    |
| <b>Los Angeles</b> |               |                |             |             |                  |               |                  |
| <i>Facilities</i>  | 11,875        | 74,968         | 131         | 3,821       | 1,972,191        | 396           | 2,063,383        |

|                        | Potable Water | Waste Water | Oil Systems | Natural Gas | Electric Power | Communication | Total     |
|------------------------|---------------|-------------|-------------|-------------|----------------|---------------|-----------|
| <i>Pipelines</i>       | 5,836         | 2,932       | 0           | 0           |                |               | 8,768     |
| <b>Total</b>           | 17,711        | 77,900      | 131         | 3,821       | 1,972,191      | 396           | 2,072,151 |
| <b>Orange</b>          |               |             |             |             |                |               |           |
| <i>Facilities</i>      | 10,176        | 93,238      | 23          | 4,286       | 440,825        | 239           | 548,786   |
| <i>Pipelines</i>       | 9,847         | 4,947       | 0           | 0           |                |               | 14,794    |
| <b>Total</b>           | 20,023        | 98,185      | 23          | 4,286       | 440,825        | 239           | 563,580   |
| <b>Riverside</b>       |               |             |             |             |                |               |           |
| <i>Facilities</i>      | 59,137        | 488,580     | 0           | 3,745       | 1,077,852      | 606           | 1,629,920 |
| <i>Pipelines</i>       | 28,460        | 14,296      | 0           | 0           |                |               | 42,756    |
| <b>Total</b>           | 87,598        | 502,876     | 0           | 3,745       | 1,077,852      | 606           | 1,672,676 |
| <b>San Bernardino</b>  |               |             |             |             |                |               |           |
| <i>Facilities</i>      | 7,761         | 176,238     | 0           | 910         | 2,133,828      | 323           | 2,319,060 |
| <i>Pipelines</i>       | 4,654         | 2,338       | 0           | 0           |                |               | 6,991     |
| <b>Total</b>           | 12,414        | 178,575     | 0           | 910         | 2,133,828      | 323           | 2,326,051 |
| <b>San Diego</b>       |               |             |             |             |                |               |           |
| <i>Facilities</i>      | 2,907         | 158,287     | 3           | 11,258      | 1,152,147      | 416           | 1,325,018 |
| <i>Pipelines</i>       | 9,624         | 4,834       | 0           | 0           |                |               | 14,459    |
| <b>Total</b>           | 12,531        | 163,121     | 3           | 11,258      | 1,152,147      | 416           | 1,339,477 |
| <b>San Luis Obispo</b> |               |             |             |             |                |               |           |
| <i>Facilities</i>      | 0             | 0           | 0           | 0           | 650            | 0             | 650       |
| <i>Pipelines</i>       | 45            | 23          | 0           | 0           |                |               | 67        |

|                      | Potable Water  | Waste Water      | Oil Systems | Natural Gas   | Electric Power   | Communication | Total             |
|----------------------|----------------|------------------|-------------|---------------|------------------|---------------|-------------------|
| <b>Total</b>         | 45             | 23               | 0           | 0             | 650              | 0             | 718               |
| <b>Santa Barbara</b> |                |                  |             |               |                  |               |                   |
| <i>Facilities</i>    | 0              | 617              | 0           | 88            | 354              | 1             | 1,061             |
| <i>Pipelines</i>     | 71             | 36               | 0           | 0             |                  |               | 107               |
| <b>Total</b>         | 71             | 653              | 0           | 88            | 354              | 1             | 1,168             |
| <b>Ventura</b>       |                |                  |             |               |                  |               |                   |
| <i>Facilities</i>    | 140            | 1,721            | 0           | 87            | 20,043           | 4             | 21,996            |
| <i>Pipelines</i>     | 192            | 97               | 0           | 0             |                  |               | 289               |
| <b>Total</b>         | 333            | 1,818            | 0           | 87            | 20,043           | 4             | 22,284            |
| <b>Total</b>         | <b>155,983</b> | <b>1,151,020</b> | <b>159</b>  | <b>24,201</b> | <b>8,755,281</b> | <b>2,145</b>  | <b>10,088,789</b> |
| <b>Region Total</b>  | <b>155,983</b> | <b>1,151,020</b> | <b>159</b>  | <b>24,201</b> | <b>8,755,281</b> | <b>2,145</b>  | <b>10,088,789</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.

## Hazus Quick Assessment Report

### Estimated Economic Loss (\$ Billions)

| Category               | Description           | Range          |
|------------------------|-----------------------|----------------|
| General Building Stock | Building Damage       | 17.00 - 68.00  |
|                        | Building Contents     | 2.20 - 8.80    |
|                        | Business Interruption | 2.90 - 11.50   |
| Infrastructure         | Lifelines Damage      |                |
| <b>Total</b>           |                       | 27.00 - 108.20 |

### Preliminary Damage Assessment (PDA) Estimates

| Description  | Residential | Commercial | Other  | Total   |
|--------------|-------------|------------|--------|---------|
| Affected     | 736,900     | 61,300     | 23,700 | 821,900 |
| Minor        | 108,100     | 18,300     | 7,500  | 133,900 |
| Major        | 17,100      | 2,600      | 1,000  | 20,700  |
| Destroyed    | 4,100       | 500        | 130    | 4,730   |
| <b>Total</b> | 866,200     | 82,700     | 32,330 | 981,230 |

### Estimated Casualties : Night Time

| Severity Level | Description      | # Persons     |
|----------------|------------------|---------------|
| Level 1        | Medical Aid      | 2,000 - 8,000 |
| Level 2        | Hospital Care    | 200 - 900     |
| Level 3        | Life-threatening | 20 - 60       |
| Level 4        | Fatalities       | 30 - 110      |

### Estimated Shelter Needs

| Type                 | Households     | People          |
|----------------------|----------------|-----------------|
| Displaced Households | 4,000 - 15,000 | 10,000 - 37,500 |
| Public Shelter       | 2,000          | 5,000           |

Comments :

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

**Disclaimer:**

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### Earthquake Information

Location :

Origin Time:

Magnitude : 7.69

Epicenter Latitude/Longitude :  
/

Depth & Type : /U

Name :  
NA

Ground Motion /Attenuation :

Maximum PGA: 1.00

Information Sources:

Comments :

### Population and Building Exposure

Population: 23,781,920

### Building Exposure : (\$ Millions)

|             |         |
|-------------|---------|
| Residential |         |
| Commercial  | 807,210 |
| Other       | 594,828 |
| Total       |         |

Counties : See Appendix

Major Metro Area :

## Hazus Quick Assessment Report

### Estimated Economic Loss (\$ Billions)

| Category               | Description           | Range          |
|------------------------|-----------------------|----------------|
| General Building Stock | Building Damage       | 17.00 - 68.00  |
|                        | Building Contents     | 2.20 - 8.80    |
|                        | Business Interruption | 2.90 - 11.50   |
| Infrastructure         | Lifelines Damage      |                |
| <b>Total</b>           |                       | 27.00 - 108.20 |

### Preliminary Damage Assessment (PDA) Estimates

| Description  | Residential | Commercial | Other  | Total   |
|--------------|-------------|------------|--------|---------|
| Affected     | 736,900     | 61,300     | 23,700 | 821,900 |
| Minor        | 108,100     | 18,300     | 7,500  | 133,900 |
| Major        | 17,100      | 2,600      | 1,000  | 20,700  |
| Destroyed    | 4,100       | 500        | 130    | 4,730   |
| <b>Total</b> | 866,200     | 82,700     | 32,330 | 981,230 |

### Estimated Casualties : Day Time

| Severity Level | Description      | # Persons      |
|----------------|------------------|----------------|
| Level 1        | Medical Aid      | 3,000 - 11,000 |
| Level 2        | Hospital Care    | 400 - 1,400    |
| Level 3        | Life-threatening | 40 - 150       |
| Level 4        | Fatalities       | 60 - 200       |

### Estimated Shelter Needs

| Type                 | Households     | People          |
|----------------------|----------------|-----------------|
| Displaced Households | 4,000 - 15,000 | 10,000 - 37,500 |
| Public Shelter       | 2,000          | 5,000           |

Comments :

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Counties : See Appendix

Major Metro Area :

## Hazus Quick Assessment Report

### Estimated Economic Loss (\$ Billions)

| Category               | Description           | Range          |
|------------------------|-----------------------|----------------|
| General Building Stock | Building Damage       | 17.00 - 68.00  |
|                        | Building Contents     | 2.20 - 8.80    |
|                        | Business Interruption | 2.90 - 11.50   |
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| Minor        | 108,100     | 18,300     | 7,500  | 133,900 |
| Major        | 17,100      | 2,600      | 1,000  | 20,700  |
| Destroyed    | 4,100       | 500        | 130    | 4,730   |
| <b>Total</b> | 866,200     | 82,700     | 32,330 | 981,230 |

### Estimated Casualties : Commute Time

| Severity Level | Description      | # Persons     |
|----------------|------------------|---------------|
| Level 1        | Medical Aid      | 1,900 - 8,000 |
| Level 2        | Hospital Care    | 300 - 1,200   |
| Level 3        | Life-threatening | 110 - 500     |
| Level 4        | Fatalities       | 60 - 200      |

### Estimated Shelter Needs

| Type                 | Households     | People          |
|----------------------|----------------|-----------------|
| Displaced Households | 4,000 - 15,000 | 10,000 - 37,500 |
| Public Shelter       | 2,000          | 5,000           |

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.

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Epicenter Latitude/Longitude :  
/

Depth & Type : /U

Name :  
NA

Ground Motion /Attenuation :

Maximum PGA: 1.00

Information Sources:

Comments :

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Population: 23,781,920

### Building Exposure : (\$ Millions)

|             |         |
|-------------|---------|
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| Commercial  | 807,210 |
| Other       | 594,828 |
| Total       |         |

Counties : See Appendix

Major Metro Area :

## Shelter Summary Report

April 19, 2024

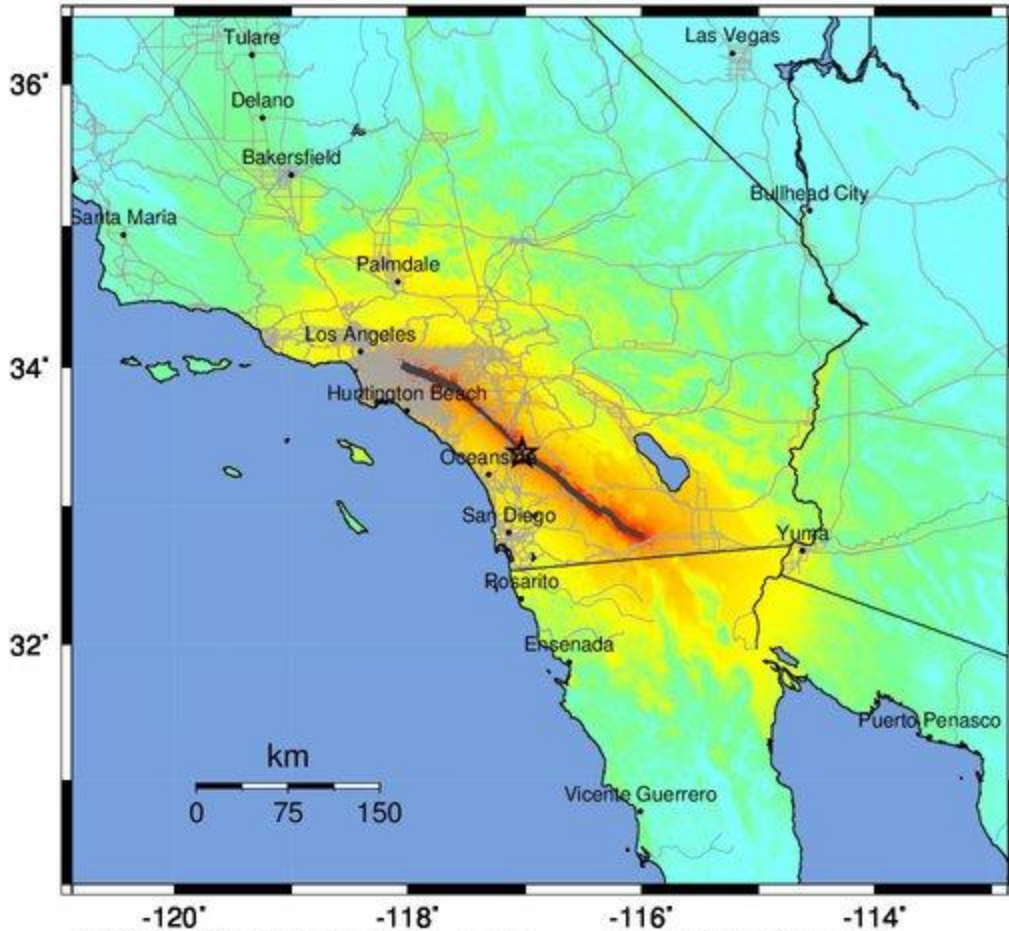
|                     | # of Displaced Households | # of People Needing Short Term Shelter |
|---------------------|---------------------------|--|
| <b>California</b>   |                           |  |
| San Luis Obispo     | 0                         | 0                                      |
| Inyo                | 0                         | 0                                      |
| Riverside           | 2,189                     | 1,581                                  |
| San Bernardino      | 1,178                     | 764                                    |
| Imperial            | 5                         | 4                                      |
| Ventura             | 0                         | 0                                      |
| Kern                | 0                         | 0                                      |
| Orange              | 2,792                     | 1,812                                  |
| San Diego           | 334                       | 177                                    |
| Los Angeles         | 1,093                     | 658                                    |
| Santa Barbara       | 0                         | 0                                      |
| <b>Total</b>        | <b>7,590</b>              | <b>4,996</b>                           |
| <b>Region Total</b> | <b>7,590</b>              | <b>4,996</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 Elsinore: CM+J+T+s+GI+W - Median ground motions Scenario

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



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

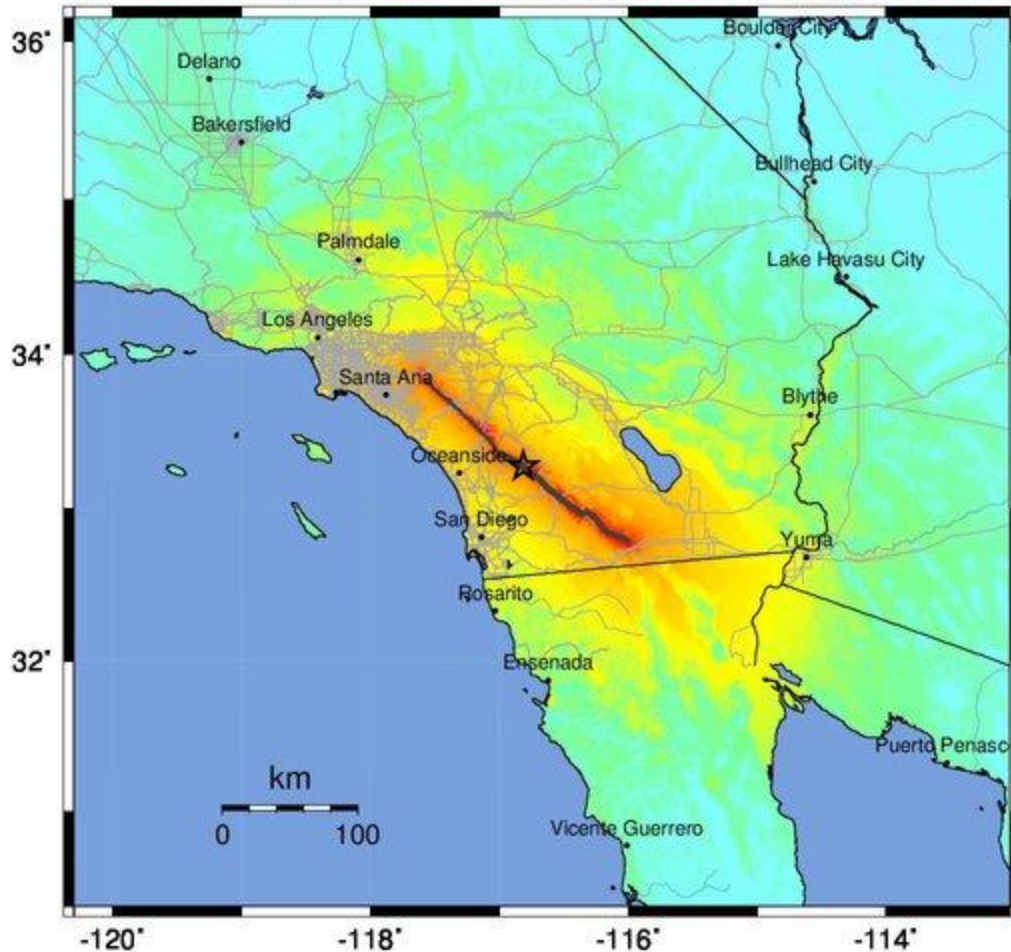
| PERCEIVED SHAKING      | Not felt | Weak   | Light | Moderate   | Strong | Very strong | Severe     | Violent | Extreme    |
|------------------------|----------|--------|-------|------------|--------|-------------|------------|---------|------------|
| POTENTIAL DAMAGE       | none     | none   |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

Scale based upon Worden et al. (2012)

-- Earthquake Planning Scenario --

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

Scenario Date: Jun 30, 2017 10:03:27 AM MDT M 7.7 N33.28 W116.82 Depth: 12.0km



PLANNING SCENARIO ONLY -- Map Version 17 Processed 2017-07-03 08:23:36 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)