

Company: San Diego Gas & Electric Company (U 902 M)
Proceeding: 2024 General Rate Case – Track 2
Application: A.22-05-016
Exhibit: Exhibit SDG&E-T2-03

CHAPTER 3
PREPARED DIRECT TESTIMONY OF
THOMAS PORTER
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY
(TRACK 2 – RISK LANDSCAPE)

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA



October 2023

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1 **PREPARED DIRECT TESTIMONY OF THOMAS PORTER**
2 **ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**

3 **I. INTRODUCTION**

4 The purpose of my testimony is to explain the risk of wildfire in San Diego Gas &
5 Electric Company's (SDG&E) service territory, and how SDG&E's continued focus to prevent
6 catastrophic utility-related ignitions and mitigate against the worst-case scenario aids in
7 mitigating that risk. I will also provide historical and fire science context to SDG&E's
8 assumptions about wildfire size and potential in our service territory. San Diego County
9 continues to rank as the highest risk county for wildfire in the state, with a wildfire risk index of
10 100 according to the Federal Emergency Management Authority.¹

11 Every acre of wildland has potential to burn every year. That potential increases each
12 year until a burn occurs reducing or eliminating the fuels required for fires to grow. The size of a
13 fire, regardless of ignition source, will be impacted by several obvious factors, such as drought
14 and wind conditions, but also fuel moisture, suppression availability and operations, terrain, and
15 natural fire breaks. Wildfire is a cyclical occurrence, and it will return to our region with greater
16 intensity unless we plan for it and mitigate its disastrous potential.

17 Further, as the climate changes, producing more extreme weather conditions, the burn
18 potential will be affected, and current predictions point to the occurrence of more frequent large
19 fires. It is important to consider the big picture and the evidence across the Western United
20 States and around the world, where on a nearly uniform basis, fire activity and severity are
21 increasing. We can look at northern California, Oregon, Washington, and British Columbia, as
22 well as the Hawaiian Islands, where wildfire conditions are following a pattern that started 20

¹ Federal Emergency Management Authority, National Risk Index (as of October 26, 2023) (Page 36 of Appendix A addresses wildfire risk).

1 plus years ago here in Southern California, and specifically in San Diego County with the Cedar
2 Fire.

3 **II. FIRE RISK ASSESSMENT**

4 **A. Fire Size and likelihood**

5 Estimating the exact likelihood of experiencing catastrophic fires during the same year is
6 something best done by wildfire suppression agencies and partners in academia. While the exact
7 likelihood of multiple fires starting in the same year is challenging to predict, it is worth noting
8 that in 2007, six fires ignited in the San Diego region between October 21st and October 23rd that
9 in total burned approximately 367,000 acres (about half the area of Yosemite National Park).
10 When comparing fire history of San Diego County with the burn perimeters of the 2003 and
11 2007 fires, it is also worth noting that the 1970 Laguna Fire scar is 175,425 acres (6 times the
12 area of San Fransisco) was one of the few areas where a large fire did not burn during the 2003
13 and 2007 events. If this area had ignited, it would have burned at a similar rate and acreage. That
14 would have pushed the total acres burned during those events to exceed 500,000 acres. It is this
15 multi-fire situation that creates the potential for a wildfire to burn 500,000 acres and establishes
16 it as a realistic worst case for the Company to plan for.

17 For fires to occur in the same year it would take regionally similar burning conditions.
18 Fuel loading is dependent on seasonal and climatological growing conditions in a general region.
19 Similarly, while each microclimate may experience slight variations in impacts from an extreme
20 Santa Ana, history has shown that large fires can and have started simultaneously. The HFTD
21 (High Fire Threat District) in SDG&E's service territory covers approximately 1,800,000 acres
22 (912,000 Tier 3; 893,000 Tier 2) and is an indication of areas where catastrophic fires can occur.
23 Based on fire history, modeling, and subject matter expertise, the likelihood of large fires
24 occurring during the same year is higher than in separate years.

1 **B. Fire History**

2 In 2003, a wildfire burned at least 394,942 acres in San Diego. In 2007, at least 349,882
3 acres burned in San Diego due to wildfires. These two years, which included some of the most
4 significant wildfire years in California to date, and one of the state’s most significant utility-
5 related fires, the Witch Fire, occurred 20 and 16 years ago, just outside of the 15 years of data
6 that CAL FIRE has published on its website. However, records of wildfire acres burned for years
7 prior to 2008 are available and the impacts of these events are well-documented.

8 It is important to understand and use a long-term perspective when considering fire
9 history and fire potential. If analysis uses only a 15 or even 20-year history, crucial details may
10 be missed. Additionally, as we begin to understand the impacts of climate change on the
11 environment, it is even more important that we not limit our understanding of what may happen
12 by constraining our view to only what has happened in the past. California’s recent fire history is
13 full of examples of otherwise unprecedented events. We need only look at the recent fire history
14 of California, Maui, the pacific northwest, and Canada to understand that with increasing
15 extreme conditions resulting from climate change, the threat of significant wildfires will spread
16 and potentially increase.

17 Unfortunately, the assumption that something will not happen in the future because it has
18 not occurred in the recent past has already been proven wrong. For example, in Decision (D.) 12-
19 01-032, the California Public Utilities Commission (Commission) concluded that, “Because the
20 risk of power-line fires is lower in Northern California compared to Southern California, it is
21 reasonable to have a lower frequency of patrol inspections, detailed inspections, and intrusive
22 inspections of [] facilities in Northern California compared to Southern California.”² The

² D.12-01-032 at 166, Finding of Fact 8.

1 Commission based this conclusion on the available information at the time, including the fact
2 that very few large fires had occurred in the area in the past hundred years, and high winds like
3 the Southern California Santa Ana conditions were less frequent and during different times of the
4 year. However, unprecedented drought and environmental conditions soon demonstrated the
5 growing risk of wildfires across the state. It remains important that historical information is not
6 limited to a short window in history, so we can better understand and predict the overall risk and
7 potential of fires burning during specific seasons.

8 **C. Fire Cycle**

9 The fuel types in the SDG&E service territory are typically on a 15–30-year loading
10 cycle. Assuming the same types of fuels will grow back after a fire, an area impacted by a fire
11 will typically grow back to a level of similar horizontal continuity within about 10-12 years. That
12 coverage will continue to grow and create increased fuel loads, which will typically reach their
13 peak fuel load within a 25–30-year period. If they do not burn, the years that follow will be
14 marked with additional dead fuel accumulation and leaf litter that increases wildfire potential and
15 spread in the dry season. All of this assumes that fuel bed remains minimally impacted by fuels
16 management, construction, or wildfires. Estimating risk with a focus on 20 years is the approach
17 the makes the most sense to SDG&E. This fuel bed cycle is likely to be able to support large
18 fires.

19 **D. Impact of all fires**

20 The 2003 and 2007 wildfires proved to be an early warning to the rest of the West Coast
21 and the western half of the United States. From 2000 through 2003, there was a significant die-
22 off of forest trees due to an extended drought and bark beetle epidemic. Those events were
23 followed by the largest and most destructive siege of wildfires in the state’s written history. In

1 2003, wildfires burned 400 thousand acres in the San Diego region alone. This was followed by
2 2007, when another 350 thousand acres burned, in part due to a utility-related ignition.

3 In prior statements, stakeholders have argued that a limited dataset, such as the past 15
4 years is sufficient to measure current wildfire risk. I disagree. When looking at the cyclical
5 nature of wildfire, vegetation growth rates, drought cycles, and unprecedented climate change,
6 15 years of data is not sufficient to determine trends that should be measured in decades. The rest
7 of the state has seen an increase in fire size and occurrence that has overshadowed almost any
8 recorded history. And the fires in Oregon and Washington, and this year in Hawaii and British
9 Columbia are again challenging the way fire scientists have modeled and predicted wildfire size
10 and occurrence. As our climate continues to change so must our thinking about the possible
11 impacts on our wildfire potential. Given the existing data, a 500 thousand acre wildfire in San
12 Diego is a very real possibility and should be considered a reasonable worst case to plan for in a
13 highly variable and changing climate.

14 **E. The Success of SDG&E's Wildfire Mitigation Program to Date**

15 I was personally involved in the suppression of the 2003 Cedar Fire and witnessed the
16 development of SDG&E's early wildfire mitigation efforts. SDG&E's leadership in this area
17 provided a significant benefit to the region as the company built up a strong emergency
18 management department, improved situational awareness, and developed a fire science team.
19 SDG&E also developed strong partnerships with the public safety community, in the form of its
20 Wildfire Safety Community Advisory Council, Public Safety Partner Portal for Public Safety
21 Power Shutoffs (PSPS) and other emergency events, and other outreach and programs.

22 For instance, SDG&E supports the region's fire suppression efforts through its aerial
23 suppression resources, including five helicopters, two of which are committed year-round and
24 enable SDG&E to be prepared 365 days a year. SDG&E's air crane is one of the best tools in the

1 industry, with the capability of dropping 2,650 gallons (more than 5 fire engines) of water on a
2 fire. SDG&E also fosters awareness of potential fires and enables identification of potential
3 ignitions through its dense camera network and satellite tools, which can identify smoke before a
4 fire grows. With tools like these to support the region's fire fighters, SDG&E can effectively
5 reduce the likelihood of an ignition turning into a wildfire. These tools, as well as other SDG&E
6 investments, also likely reduced the wildfire risk in SDG&E's service territory from 2017-2021,
7 when the region again experienced conditions that could have resulted in a significant fire.

8 **III. CONCLUSION**

9 In conclusion, as a Registered Professional Forester in California and a retired State Fire
10 Chief, I believe every acre of California's wildland is susceptible to wildfire. Using a reasonable
11 worst-case scenario to develop SDG&E's wildfire mitigation plans has been and remains the
12 right decision to provide for public safety and the reliability of the system we all need to survive
13 and thrive. SDG&E's wildfire mitigation program, and its investments from 2019-2022 have
14 served to effectively reduce the risk of wildfire and the Commission should find them just and
15 reasonable.

16 This concludes my prepared direct testimony.

1 **IV. WITNESS QUALIFICATIONS**

2 My name is Thom Porter. My business address is 8330 Century Park Court, San Diego,
3 California, 92123. I am employed by SDG&E as the Director of Emergency Management. I am
4 responsible for developing and overseeing the execution of the Company's Emergency
5 Management and Aviation Services programs. I joined SDG&E in 2022 after retiring from a
6 career with CAL FIRE, where my last assignment was the Director of CAL FIRE in Sacramento.
7 I was appointed California State Forester and Fire Chief at the end of 2018 and confirmed in
8 2019. I worked with the State as a Forester and Fire Chief for 22 years and as a private industry
9 forester for 8 years prior to my work with CAL FIRE. I have a BS degree in Forest Management
10 from the University of California at Berkeley and am a Registered Professional Forester in
11 California.

12 This is the first time I have testified before the Commission.

Appendix A

National Risk Index

October 26, 2023

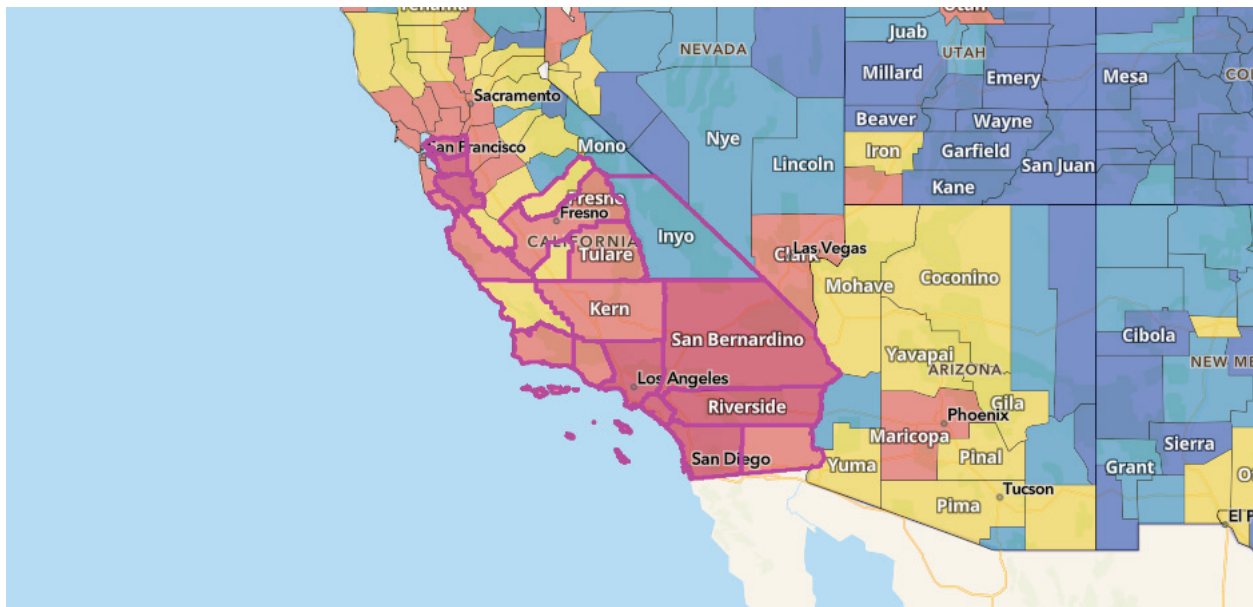
Risk Comparison Report

Use this report to determine how risk factors in selected communities compare to each other. Click a community name in any table below to open an individual risk profile report for that community and review its risk factors in more detail.

While reviewing this report, keep in mind that low risk is driven by lower loss due to natural hazards, lower social vulnerability, and higher community resilience.

For more information about the National Risk Index, its data, and how to interpret the information it provides, please review the **About the National Risk Index** and **How to Take Action** sections at the end of this report. Or, visit the National Risk Index website at hazards.fema.gov/nri/learn-more to access supporting documentation and links.




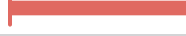





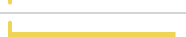
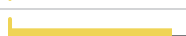


Risk Index



Risk Index Legend

- Very High
- Relatively High
- Relatively Moderate
- Relatively Low
- Very Low
- No Rating
- Not Applicable
- Insufficient Data

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile
1	Los Angeles County	CA	Very High	100	0 100
2	Riverside County	CA	Very High	99.94	0 100
3	San Bernardino County	CA	Very High	99.9	0 100
4	Alameda County	CA	Very High	99.87	0 100
5	Santa Clara County	CA	Very High	99.84	0 100
6	Orange County	CA	Very High	99.78	0 100
7	San Diego County	CA	Very High	99.68	0 100

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile
8	Contra Costa County	CA	Very High	99.59	0  100
9	Ventura County	CA	Relatively High	99.43	0  100
10	Santa Barbara County	CA	Relatively High	99.4	0  100
11	Kern County	CA	Relatively High	99.01	0  100
12	Monterey County	CA	Relatively High	98.38	0  100
13	Fresno County	CA	Relatively High	98.09	0  100
14	Imperial County	CA	Relatively High	98.06	0  100
15	Santa Cruz County	CA	Relatively High	97.61	0  100
16	Tulare County	CA	Relatively High	95.77	0  100
17	Madera County	CA	Relatively Moderate	94.65	0  100
18	San Luis Obispo County	CA	Relatively Moderate	93.32	0  100
19	Kings County	CA	Relatively Moderate	91.06	0  100
20	Inyo County	CA	Relatively Low	75.88	0  100

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Los Angeles County	CA	\$3,916,212,454	Very High	Very Low	1.36	\$5,326,192,908	100
2	Riverside County	CA	\$1,190,667,489	Very High	Relatively Low	1.34	\$1,590,497,610	99.94
3	San Bernardino County	CA	\$1,137,542,458	Very High	Relatively Moderate	1.34	\$1,523,897,374	99.9
4	Alameda County	CA	\$1,212,128,362	Relatively Moderate	Very High	1.13	\$1,368,904,673	99.87
5	Santa Clara County	CA	\$1,219,166,643	Relatively Low	Relatively High	1.11	\$1,351,778,299	99.84
6	Orange County	CA	\$989,276,586	Relatively Moderate	Very Low	1.26	\$1,246,484,361	99.78
7	San Diego County	CA	\$799,862,388	Relatively High	Very Low	1.2	\$959,720,165	99.68
8	Contra Costa County	CA	\$596,515,813	Relatively Moderate	Relatively High	1.11	\$661,562,638	99.59
9	Ventura County	CA	\$395,627,536	Relatively High	Relatively Moderate	1.22	\$483,101,627	99.43
10	Santa Barbara County	CA	\$381,123,805	Very High	Relatively Moderate	1.21	\$460,842,142	99.4
11	Kern County	CA	\$246,718,363	Very High	Very Low	1.41	\$348,935,218	99.01
12	Monterey County	CA	\$192,004,893	Very High	Relatively Low	1.37	\$263,588,414	98.38
13	Fresno County	CA	\$151,424,722	Very High	Relatively Low	1.53	\$231,090,303	98.09
14	Imperial County	CA	\$135,567,859	Very High	Very Low	1.7	\$230,450,355	98.06
15	Santa Cruz County	CA	\$168,322,253	Relatively High	Relatively High	1.18	\$198,448,720	97.61
16	Tulare County	CA	\$75,528,558	Very High	Very Low	1.55	\$117,045,494	95.77
17	Madera County	CA	\$63,720,373	Very High	Very Low	1.41	\$89,629,894	94.65
18	San Luis Obispo County	CA	\$66,456,913	Relatively Moderate	Very High	1.06	\$70,451,762	93.32
19	Kings County	CA	\$32,860,353	Very High	Very Low	1.52	\$49,931,550	91.06
20	Inyo County	CA	\$12,367,524	Relatively Moderate	Relatively Low	1.31	\$16,167,684	75.88

Hazard Type Risk Index

Hazard type Risk Index scores are calculated using data for only a single hazard type, and reflect a community's relative risk for only that hazard type.

Avalanche

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile
1	Inyo County	CA	Relatively Moderate	77.4	
2	Tulare County	CA	Very Low	34.13	
3	Los Angeles County	CA	Very Low	33.65	
4	San Diego County	CA	Very Low	31.25	
5	San Bernardino County	CA	Very Low	13.94	
6	Madera County	CA	Very Low	8.65	
7	Fresno County	CA	Very Low	5.29	
	Alameda County	CA	Not Applicable		
	Contra Costa County	CA	Not Applicable		
	Imperial County	CA	Not Applicable		
	Kern County	CA	Not Applicable		
	Kings County	CA	Not Applicable		
	Monterey County	CA	Not Applicable		
	Orange County	CA	Not Applicable		
	Riverside County	CA	Not Applicable		
	San Luis Obispo County	CA	Not Applicable		
	Santa Barbara County	CA	Not Applicable		
	Santa Clara County	CA	Not Applicable		
	Santa Cruz County	CA	Not Applicable		
	Ventura County	CA	Not Applicable		

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Inyo County	CA	\$368,508	Relatively Moderate	Relatively Low	1.31	\$432,020	77.4
2	Tulare County	CA	\$61,612	Very High	Very Low	1.55	\$82,438	34.13
3	Los Angeles County	CA	\$61,612	Very High	Very Low	1.36	\$80,336	33.65
4	San Diego County	CA	\$61,612	Relatively High	Very Low	1.2	\$77,342	31.25
5	San Bernardino County	CA	\$47,206	Very High	Relatively Moderate	1.34	\$55,759	13.94
6	Madera County	CA	\$36,967	Very High	Very Low	1.41	\$48,141	8.65
7	Fresno County	CA	\$36,967	Very High	Relatively Low	1.53	\$43,586	5.29
	Alameda County	CA	N/A	Relatively Moderate	Very High	1.13	N/A	N/A
	Contra Costa County	CA	N/A	Relatively Moderate	Relatively High	1.11	N/A	N/A
	Imperial County	CA	N/A	Very High	Very Low	1.7	N/A	N/A

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
	Kern County	CA	N/A	Very High	Very Low	1.41	N/A	N/A
	Kings County	CA	N/A	Very High	Very Low	1.52	N/A	N/A
	Monterey County	CA	N/A	Very High	Relatively Low	1.37	N/A	N/A
	Orange County	CA	N/A	Relatively Moderate	Very Low	1.26	N/A	N/A
	Riverside County	CA	N/A	Very High	Relatively Low	1.34	N/A	N/A
	San Luis Obispo County	CA	N/A	Relatively Moderate	Very High	1.06	N/A	N/A
	Santa Barbara County	CA	N/A	Very High	Relatively Moderate	1.21	N/A	N/A
	Santa Clara County	CA	N/A	Relatively Low	Relatively High	1.11	N/A	N/A
	Santa Cruz County	CA	N/A	Relatively High	Relatively High	1.18	N/A	N/A
	Ventura County	CA	N/A	Relatively High	Relatively Moderate	1.22	N/A	N/A





Coastal Flooding

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile
1	Santa Clara County	CA	Relatively Low	74.04	
2	Alameda County	CA	Relatively Low	72.23	
3	Contra Costa County	CA	Relatively Low	57.55	
4	Santa Barbara County	CA	Relatively Low	50.7	
5	Monterey County	CA	Relatively Low	46.68	
6	Orange County	CA	Very Low	44.67	
7	Los Angeles County	CA	Very Low	43.26	
8	San Luis Obispo County	CA	Very Low	33.8	
9	Santa Cruz County	CA	Very Low	33.6	
10	San Diego County	CA	Very Low	32.8	
11	Ventura County	CA	Very Low	27.57	
	Fresno County	CA	Not Applicable		
	Imperial County	CA	Not Applicable		
	Inyo County	CA	Not Applicable		
	Kern County	CA	Not Applicable		
	Kings County	CA	Not Applicable		
	Madera County	CA	Not Applicable		
	Riverside County	CA	Not Applicable		
	San Bernardino County	CA	Not Applicable		
	Tulare County	CA	Not Applicable		

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Santa Clara County	CA	\$1,001,237	Relatively Low	Relatively High	1.11	\$1,119,806	74.04
2	Alameda County	CA	\$875,558	Relatively Moderate	Very High	1.13	\$977,693	72.23
3	Contra Costa County	CA	\$188,681	Relatively Moderate	Relatively High	1.11	\$226,823	57.55
4	Santa Barbara County	CA	\$105,405	Very High	Relatively Moderate	1.21	\$134,299	50.7
5	Monterey County	CA	\$62,726	Very High	Relatively Low	1.37	\$84,746	46.68
6	Orange County	CA	\$72,431	Relatively Moderate	Very Low	1.26	\$61,413	44.67
7	Los Angeles County	CA	\$60,661	Very High	Very Low	1.36	\$53,678	43.26
8	San Luis Obispo County	CA	\$20,349	Relatively Moderate	Very High	1.06	\$19,990	33.8
9	Santa Cruz County	CA	\$17,591	Relatively High	Relatively High	1.18	\$19,779	33.6
10	San Diego County	CA	\$19,342	Relatively High	Very Low	1.2	\$18,837	32.8

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
11	Ventura County	CA	\$6,463	Relatively High	Relatively Moderate	1.22	\$6,431	27.57
	Fresno County	CA	N/A	Very High	Relatively Low	1.53	N/A	N/A
	Imperial County	CA	N/A	Very High	Very Low	1.7	N/A	N/A
	Inyo County	CA	N/A	Relatively Moderate	Relatively Low	1.31	N/A	N/A
	Kern County	CA	N/A	Very High	Very Low	1.41	N/A	N/A
	Kings County	CA	N/A	Very High	Very Low	1.52	N/A	N/A
	Madera County	CA	N/A	Very High	Very Low	1.41	N/A	N/A
	Riverside County	CA	N/A	Very High	Relatively Low	1.34	N/A	N/A
	San Bernardino County	CA	N/A	Very High	Relatively Moderate	1.34	N/A	N/A
	Tulare County	CA	N/A	Very High	Very Low	1.55	N/A	N/A

Cold Wave

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile	
1	Inyo County	CA	Very Low	26.92	0	
	Alameda County	CA	No Rating	0	0	
	Contra Costa County	CA	No Rating	0	0	
	Fresno County	CA	No Rating	0	0	
	Imperial County	CA	No Rating	0	0	
	Kern County	CA	No Rating	0	0	
	Kings County	CA	No Rating	0	0	
	Los Angeles County	CA	No Rating	0	0	
	Madera County	CA	No Rating	0	0	
	Monterey County	CA	No Rating	0	0	
	Orange County	CA	No Rating	0	0	
	Riverside County	CA	No Rating	0	0	
	San Bernardino County	CA	No Rating	0	0	
	San Diego County	CA	No Rating	0	0	
	San Luis Obispo County	CA	No Rating	0	0	
	Santa Barbara County	CA	No Rating	0	0	
	Santa Clara County	CA	No Rating	0	0	
	Santa Cruz County	CA	No Rating	0	0	
	Tulare County	CA	No Rating	0	0	
	Ventura County	CA	No Rating	0	0	

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Inyo County	CA	\$0	Relatively Moderate	Relatively Low	1.31	\$0	26.92
	Alameda County	CA	\$0	Relatively Moderate	Very High	1.13	\$0	0
	Contra Costa County	CA	\$0	Relatively Moderate	Relatively High	1.11	\$0	0
	Fresno County	CA	\$0	Very High	Relatively Low	1.53	\$0	0
	Imperial County	CA	\$0	Very High	Very Low	1.7	\$0	0
	Kern County	CA	\$0	Very High	Very Low	1.41	\$0	0
	Kings County	CA	\$0	Very High	Very Low	1.52	\$0	0
	Los Angeles County	CA	\$0	Very High	Very Low	1.36	\$0	0
	Madera County	CA	\$0	Very High	Very Low	1.41	\$0	0
	Monterey County	CA	\$0	Very High	Relatively Low	1.37	\$0	0

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
	Orange County	CA	\$0	Relatively Moderate	Very Low	1.26	\$0	0
	Riverside County	CA	\$0	Very High	Relatively Low	1.34	\$0	0
	San Bernardino County	CA	\$0	Very High	Relatively Moderate	1.34	\$0	0
	San Diego County	CA	\$0	Relatively High	Very Low	1.2	\$0	0
	San Luis Obispo County	CA	\$0	Relatively Moderate	Very High	1.06	\$0	0
	Santa Barbara County	CA	\$0	Very High	Relatively Moderate	1.21	\$0	0
	Santa Clara County	CA	\$0	Relatively Low	Relatively High	1.11	\$0	0
	Santa Cruz County	CA	\$0	Relatively High	Relatively High	1.18	\$0	0
	Tulare County	CA	\$0	Very High	Very Low	1.55	\$0	0
	Ventura County	CA	\$0	Relatively High	Relatively Moderate	1.22	\$0	0

Drought

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile	
1	Santa Barbara County	CA	Very High	100	0	100
2	Fresno County	CA	Relatively High	99.65	0	100
3	Monterey County	CA	Relatively High	99.55	0	100
4	Contra Costa County	CA	Relatively High	99.27	0	100
5	Madera County	CA	Relatively High	98.92	0	100
6	Kings County	CA	Relatively High	98.79	0	100
7	Alameda County	CA	Relatively High	98.76	0	100
8	Kern County	CA	Relatively High	98.54	0	100
9	San Luis Obispo County	CA	Relatively High	98.41	0	100
10	Tulare County	CA	Relatively Moderate	98.22	0	100
11	Santa Cruz County	CA	Relatively Moderate	97.77	0	100
12	Ventura County	CA	Relatively Moderate	97.74	0	100
13	Santa Clara County	CA	Relatively Moderate	95.99	0	100
14	Imperial County	CA	Relatively Moderate	91.98	0	100
15	San Diego County	CA	Relatively Moderate	89.56	0	100
16	Riverside County	CA	Relatively Moderate	87.75	0	100
17	Los Angeles County	CA	Relatively Low	73.85	0	100
18	San Bernardino County	CA	Relatively Low	64.24	0	100
19	Orange County	CA	Relatively Low	61.31	0	100
20	Inyo County	CA	Very Low	23.16	0	100

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Santa Barbara County	CA	\$214,679,980	Very High	Relatively Moderate	1.21	\$255,280,587	100
2	Fresno County	CA	\$19,475,317	Very High	Relatively Low	1.53	\$32,043,692	99.65
3	Monterey County	CA	\$17,876,569	Very High	Relatively Low	1.37	\$24,386,985	99.55
4	Contra Costa County	CA	\$10,774,431	Relatively Moderate	Relatively High	1.11	\$11,839,427	99.27
5	Madera County	CA	\$5,516,976	Very High	Very Low	1.41	\$8,197,707	98.92
6	Kings County	CA	\$4,073,294	Very High	Very Low	1.52	\$6,163,851	98.79
7	Alameda County	CA	\$5,853,075	Relatively Moderate	Very High	1.13	\$5,658,339	98.76
8	Kern County	CA	\$3,287,242	Very High	Very Low	1.41	\$4,832,985	98.54
9	San Luis Obispo County	CA	\$3,689,787	Relatively Moderate	Very High	1.06	\$3,800,974	98.41
10	Tulare County	CA	\$1,997,962	Very High	Very Low	1.55	\$3,218,861	98.22

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
11	Santa Cruz County	CA	\$1,932,724	Relatively High	Relatively High	1.18	\$2,328,235	97.77
12	Ventura County	CA	\$1,741,402	Relatively High	Relatively Moderate	1.22	\$2,304,751	97.74
13	Santa Clara County	CA	\$1,124,041	Relatively Low	Relatively High	1.11	\$1,389,783	95.99
14	Imperial County	CA	\$550,023	Very High	Very Low	1.7	\$818,205	91.98
15	San Diego County	CA	\$562,808	Relatively High	Very Low	1.2	\$638,811	89.56
16	Riverside County	CA	\$375,065	Very High	Relatively Low	1.34	\$524,851	87.75
17	Los Angeles County	CA	\$142,015	Very High	Very Low	1.36	\$179,327	73.85
18	San Bernardino County	CA	\$62,559	Very High	Relatively Moderate	1.34	\$89,354	64.24
19	Orange County	CA	\$70,453	Relatively Moderate	Very Low	1.26	\$72,661	61.31
20	Inyo County	CA	\$1,305	Relatively Moderate	Relatively Low	1.31	\$1,436	23.16








Earthquake

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile	
1	Los Angeles County	CA	Very High	100	0	100
2	Santa Clara County	CA	Very High	99.97	0	100
3	Alameda County	CA	Very High	99.94	0	100
4	San Bernardino County	CA	Very High	99.9	0	100
5	Orange County	CA	Very High	99.87	0	100
6	Riverside County	CA	Very High	99.84	0	100
7	Contra Costa County	CA	Very High	99.78	0	100
8	San Diego County	CA	Relatively High	99.75	0	100
9	Ventura County	CA	Relatively High	99.68	0	100
10	Kern County	CA	Relatively High	99.49	0	100
11	Imperial County	CA	Relatively High	99.46	0	100
12	Monterey County	CA	Relatively High	99.36	0	100
13	Santa Cruz County	CA	Relatively High	99.27	0	100
14	Santa Barbara County	CA	Relatively High	99.14	0	100
15	Fresno County	CA	Relatively High	98.98	0	100
16	Tulare County	CA	Relatively Moderate	98.15	0	100
17	San Luis Obispo County	CA	Relatively Moderate	98.09	0	100
18	Kings County	CA	Relatively Moderate	97.23	0	100
19	Madera County	CA	Relatively Moderate	96.5	0	100
20	Inyo County	CA	Relatively Moderate	95.35	0	100

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Los Angeles County	CA	\$3,780,351,907	Very High	Very Low	1.36	\$5,179,355,927	100
2	Santa Clara County	CA	\$1,201,001,769	Relatively Low	Relatively High	1.11	\$1,333,520,402	99.97
3	Alameda County	CA	\$1,178,189,306	Relatively Moderate	Very High	1.13	\$1,333,064,675	99.94
4	San Bernardino County	CA	\$964,152,496	Very High	Relatively Moderate	1.34	\$1,322,750,424	99.9
5	Orange County	CA	\$926,116,576	Relatively Moderate	Very Low	1.26	\$1,183,370,693	99.87
6	Riverside County	CA	\$838,629,250	Very High	Relatively Low	1.34	\$1,145,225,652	99.84
7	Contra Costa County	CA	\$566,466,572	Relatively Moderate	Relatively High	1.11	\$629,187,865	99.78
8	San Diego County	CA	\$400,134,231	Relatively High	Very Low	1.2	\$492,761,836	99.75
9	Ventura County	CA	\$301,415,004	Relatively High	Relatively Moderate	1.22	\$371,486,014	99.68
10	Kern County	CA	\$162,079,535	Very High	Very Low	1.41	\$231,604,774	99.49

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
11	Imperial County	CA	\$131,508,432	Very High	Very Low	1.7	\$224,189,347	99.46
12	Monterey County	CA	\$148,896,192	Very High	Relatively Low	1.37	\$206,749,720	99.36
13	Santa Cruz County	CA	\$149,330,344	Relatively High	Relatively High	1.18	\$178,258,245	99.27
14	Santa Barbara County	CA	\$137,868,164	Very High	Relatively Moderate	1.21	\$175,273,908	99.14
15	Fresno County	CA	\$88,190,821	Very High	Relatively Low	1.53	\$136,955,494	98.98
16	Tulare County	CA	\$34,327,010	Very High	Very Low	1.55	\$53,152,239	98.15
17	San Luis Obispo County	CA	\$46,275,882	Relatively Moderate	Very High	1.06	\$49,510,486	98.09
18	Kings County	CA	\$18,928,719	Very High	Very Low	1.52	\$28,458,980	97.23
19	Madera County	CA	\$13,095,612	Very High	Very Low	1.41	\$19,368,280	96.5
20	Inyo County	CA	\$8,305,550	Relatively Moderate	Relatively Low	1.31	\$11,036,230	95.35

Hail

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile
1	Fresno County	CA	Relatively Moderate	94.65	0  100
2	Tulare County	CA	Relatively Moderate	88.51	0  100
3	Kern County	CA	Relatively Low	77.63	0  100
4	Madera County	CA	Relatively Low	70.44	0  100
5	San Bernardino County	CA	Relatively Low	61.06	0  100
6	Santa Clara County	CA	Relatively Low	56.95	0  100
7	Alameda County	CA	Relatively Low	55.17	0  100
8	Los Angeles County	CA	Relatively Low	48.11	0  100
9	Kings County	CA	Relatively Low	44.89	0  100
10	Contra Costa County	CA	Very Low	36.02	0  100
11	Orange County	CA	Very Low	28.99	0  100
12	Riverside County	CA	Very Low	25.04	0  100
13	San Luis Obispo County	CA	Very Low	23.35	0  100
14	San Diego County	CA	Very Low	22.59	0  100
15	Monterey County	CA	Very Low	17.94	0  100
16	Santa Barbara County	CA	Very Low	17.18	0  100
17	Imperial County	CA	Very Low	15.78	0  100
18	Ventura County	CA	Very Low	12.5	0  100
19	Santa Cruz County	CA	Very Low	9.8	0  100
20	Inyo County	CA	Very Low	1.27	0  100

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Fresno County	CA	\$1,341,822	Very High	Relatively Low	1.53	\$2,045,009	94.65
2	Tulare County	CA	\$624,358	Very High	Very Low	1.55	\$993,965	88.51
3	Kern County	CA	\$292,913	Very High	Very Low	1.41	\$431,559	77.63
4	Madera County	CA	\$197,348	Very High	Very Low	1.41	\$292,345	70.44
5	San Bernardino County	CA	\$131,055	Very High	Relatively Moderate	1.34	\$178,618	61.06
6	Santa Clara County	CA	\$137,982	Relatively Low	Relatively High	1.11	\$149,952	56.95
7	Alameda County	CA	\$125,811	Relatively Moderate	Very High	1.13	\$136,600	55.17
8	Los Angeles County	CA	\$72,737	Very High	Very Low	1.36	\$99,450	48.11
9	Kings County	CA	\$57,311	Very High	Very Low	1.52	\$86,749	44.89
10	Contra Costa County	CA	\$54,531	Relatively Moderate	Relatively High	1.11	\$58,214	36.02

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
11	Orange County	CA	\$31,814	Relatively Moderate	Very Low	1.26	\$40,146	28.99
12	Riverside County	CA	\$24,529	Very High	Relatively Low	1.34	\$32,694	25.04
13	San Luis Obispo County	CA	\$28,109	Relatively Moderate	Very High	1.06	\$29,678	23.35
14	San Diego County	CA	\$22,389	Relatively High	Very Low	1.2	\$28,083	22.59
15	Monterey County	CA	\$14,464	Very High	Relatively Low	1.37	\$20,253	17.94
16	Santa Barbara County	CA	\$16,052	Very High	Relatively Moderate	1.21	\$19,489	17.18
17	Imperial County	CA	\$10,293	Very High	Very Low	1.7	\$17,471	15.78
18	Ventura County	CA	\$11,007	Relatively High	Relatively Moderate	1.22	\$13,280	12.5
19	Santa Cruz County	CA	\$8,092	Relatively High	Relatively High	1.18	\$9,554	9.8
20	Inyo County	CA	\$405	Relatively Moderate	Relatively Low	1.31	\$481	1.27

Heat Wave

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile	
1	Tulare County	CA	Very High	99.65	0	100
2	Fresno County	CA	Relatively High	99.46	0	100
3	Madera County	CA	Relatively High	98.95	0	100
4	Riverside County	CA	Relatively High	98.76	0	100
5	Kings County	CA	Relatively High	98.47	0	100
6	Los Angeles County	CA	Relatively High	98.44	0	100
7	Kern County	CA	Relatively High	97.9	0	100
8	San Diego County	CA	Relatively High	97.87	0	100
9	San Bernardino County	CA	Relatively High	97.49	0	100
10	Santa Clara County	CA	Relatively High	97.39	0	100
11	Imperial County	CA	Relatively High	96.79	0	100
12	Contra Costa County	CA	Relatively High	95.67	0	100
13	Alameda County	CA	Relatively Moderate	92.3	0	100
14	Orange County	CA	Relatively Moderate	89.12	0	100
15	Monterey County	CA	Relatively Moderate	86.54	0	100
16	Inyo County	CA	Relatively Moderate	83.49	0	100
17	San Luis Obispo County	CA	Relatively Moderate	79.16	0	100
18	Santa Barbara County	CA	Relatively Moderate	77.76	0	100
19	Ventura County	CA	Relatively Moderate	73.02	0	100
20	Santa Cruz County	CA	Relatively Low	67.17	0	100

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Tulare County	CA	\$19,484,740	Very High	Very Low	1.55	\$30,585,603	99.65
2	Fresno County	CA	\$12,873,728	Very High	Relatively Low	1.53	\$19,280,399	99.46
3	Madera County	CA	\$7,522,714	Very High	Very Low	1.41	\$11,138,740	98.95
4	Riverside County	CA	\$7,651,092	Very High	Relatively Low	1.34	\$10,323,436	98.76
5	Kings County	CA	\$4,987,815	Very High	Very Low	1.52	\$7,563,888	98.47
6	Los Angeles County	CA	\$5,370,958	Very High	Very Low	1.36	\$7,380,152	98.44
7	Kern County	CA	\$4,168,692	Very High	Very Low	1.41	\$5,993,321	97.9
8	San Diego County	CA	\$4,692,911	Relatively High	Very Low	1.2	\$5,869,347	97.87
9	San Bernardino County	CA	\$3,515,550	Very High	Relatively Moderate	1.34	\$4,815,488	97.49
10	Santa Clara County	CA	\$4,149,888	Relatively Low	Relatively High	1.11	\$4,642,038	97.39

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
11	Imperial County	CA	\$2,517,972	Very High	Very Low	1.7	\$3,777,275	96.79
12	Contra Costa County	CA	\$2,645,169	Relatively Moderate	Relatively High	1.11	\$2,940,182	95.67
13	Alameda County	CA	\$1,352,208	Relatively Moderate	Very High	1.13	\$1,467,593	92.3
14	Orange County	CA	\$795,214	Relatively Moderate	Very Low	1.26	\$1,021,683	89.12
15	Monterey County	CA	\$634,249	Very High	Relatively Low	1.37	\$851,236	86.54
16	Inyo County	CA	\$530,454	Relatively Moderate	Relatively Low	1.31	\$682,928	83.49
17	San Luis Obispo County	CA	\$497,272	Relatively Moderate	Very High	1.06	\$525,374	79.16
18	Santa Barbara County	CA	\$408,001	Very High	Relatively Moderate	1.21	\$478,401	77.76
19	Ventura County	CA	\$270,664	Relatively High	Relatively Moderate	1.22	\$345,931	73.02
20	Santa Cruz County	CA	\$227,573	Relatively High	Relatively High	1.18	\$242,165	67.17

Hurricane

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile
1	Riverside County	CA	Very Low	27.19	
2	San Diego County	CA	Very Low	25.35	
3	Imperial County	CA	Very Low	15.16	
	Alameda County	CA	Not Applicable		
	Contra Costa County	CA	Not Applicable		
	Fresno County	CA	Not Applicable		
	Inyo County	CA	Not Applicable		
	Kern County	CA	Not Applicable		
	Kings County	CA	Not Applicable		
	Los Angeles County	CA	Not Applicable		
	Madera County	CA	Not Applicable		
	Monterey County	CA	Not Applicable		
	Orange County	CA	Not Applicable		
	San Bernardino County	CA	Not Applicable		
	San Luis Obispo County	CA	Not Applicable		
	Santa Barbara County	CA	Not Applicable		
	Santa Clara County	CA	Not Applicable		
	Santa Cruz County	CA	Not Applicable		
	Tulare County	CA	Not Applicable		
	Ventura County	CA	Not Applicable		

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Riverside County	CA	\$28,544	Very High	Relatively Low	1.34	\$36,898	27.19
2	San Diego County	CA	\$27,738	Relatively High	Very Low	1.2	\$32,996	25.35
3	Imperial County	CA	\$10,148	Very High	Very Low	1.7	\$16,207	15.16
	Alameda County	CA	N/A	Relatively Moderate	Very High	1.13	N/A	N/A
	Contra Costa County	CA	N/A	Relatively Moderate	Relatively High	1.11	N/A	N/A
	Fresno County	CA	N/A	Very High	Relatively Low	1.53	N/A	N/A
	Inyo County	CA	N/A	Relatively Moderate	Relatively Low	1.31	N/A	N/A
	Kern County	CA	N/A	Very High	Very Low	1.41	N/A	N/A
	Kings County	CA	N/A	Very High	Very Low	1.52	N/A	N/A
	Los Angeles County	CA	N/A	Very High	Very Low	1.36	N/A	N/A

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
	Madera County	CA	N/A	Very High	Very Low	1.41	N/A	N/A
	Monterey County	CA	N/A	Very High	Relatively Low	1.37	N/A	N/A
	Orange County	CA	N/A	Relatively Moderate	Very Low	1.26	N/A	N/A
	San Bernardino County	CA	N/A	Very High	Relatively Moderate	1.34	N/A	N/A
	San Luis Obispo County	CA	N/A	Relatively Moderate	Very High	1.06	N/A	N/A
	Santa Barbara County	CA	N/A	Very High	Relatively Moderate	1.21	N/A	N/A
	Santa Clara County	CA	N/A	Relatively Low	Relatively High	1.11	N/A	N/A
	Santa Cruz County	CA	N/A	Relatively High	Relatively High	1.18	N/A	N/A
	Tulare County	CA	N/A	Very High	Very Low	1.55	N/A	N/A
	Ventura County	CA	N/A	Relatively High	Relatively Moderate	1.22	N/A	N/A

Ice Storm

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile
	Alameda County	CA	Not Applicable		
	Contra Costa County	CA	Not Applicable		
	Fresno County	CA	Not Applicable		
	Imperial County	CA	Not Applicable		
	Inyo County	CA	Not Applicable		
	Kern County	CA	Not Applicable		
	Kings County	CA	Not Applicable		
	Los Angeles County	CA	Not Applicable		
	Madera County	CA	Not Applicable		
	Monterey County	CA	Not Applicable		
	Orange County	CA	Not Applicable		
	Riverside County	CA	Not Applicable		
	San Bernardino County	CA	Not Applicable		
	San Diego County	CA	Not Applicable		
	San Luis Obispo County	CA	Not Applicable		
	Santa Barbara County	CA	Not Applicable		
	Santa Clara County	CA	Not Applicable		
	Santa Cruz County	CA	Not Applicable		
	Tulare County	CA	Not Applicable		
	Ventura County	CA	Not Applicable		

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
	Alameda County	CA	N/A	Relatively Moderate	Very High	1.13	N/A	N/A
	Contra Costa County	CA	N/A	Relatively Moderate	Relatively High	1.11	N/A	N/A
	Fresno County	CA	N/A	Very High	Relatively Low	1.53	N/A	N/A
	Imperial County	CA	N/A	Very High	Very Low	1.7	N/A	N/A
	Inyo County	CA	N/A	Relatively Moderate	Relatively Low	1.31	N/A	N/A
	Kern County	CA	N/A	Very High	Very Low	1.41	N/A	N/A
	Kings County	CA	N/A	Very High	Very Low	1.52	N/A	N/A
	Los Angeles County	CA	N/A	Very High	Very Low	1.36	N/A	N/A
	Madera County	CA	N/A	Very High	Very Low	1.41	N/A	N/A
	Monterey County	CA	N/A	Very High	Relatively Low	1.37	N/A	N/A

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
	Orange County	CA	N/A	Relatively Moderate	Very Low	1.26	N/A	N/A
	Riverside County	CA	N/A	Very High	Relatively Low	1.34	N/A	N/A
	San Bernardino County	CA	N/A	Very High	Relatively Moderate	1.34	N/A	N/A
	San Diego County	CA	N/A	Relatively High	Very Low	1.2	N/A	N/A
	San Luis Obispo County	CA	N/A	Relatively Moderate	Very High	1.06	N/A	N/A
	Santa Barbara County	CA	N/A	Very High	Relatively Moderate	1.21	N/A	N/A
	Santa Clara County	CA	N/A	Relatively Low	Relatively High	1.11	N/A	N/A
	Santa Cruz County	CA	N/A	Relatively High	Relatively High	1.18	N/A	N/A
	Tulare County	CA	N/A	Very High	Very Low	1.55	N/A	N/A
	Ventura County	CA	N/A	Relatively High	Relatively Moderate	1.22	N/A	N/A

Landslide

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile	
1	Santa Cruz County	CA	Very High	99.55	0	100
2	Monterey County	CA	Very High	99.45	0	100
3	Kern County	CA	Relatively High	98.23	0	100
4	San Bernardino County	CA	Relatively High	97.88	0	100
5	Ventura County	CA	Relatively High	97.21	0	100
6	San Luis Obispo County	CA	Relatively High	96.59	0	100
7	Fresno County	CA	Relatively High	96.34	0	100
8	Los Angeles County	CA	Relatively High	96.31	0	100
9	Santa Barbara County	CA	Relatively High	96.05	0	100
10	Riverside County	CA	Relatively High	95.89	0	100
11	San Diego County	CA	Relatively High	95.7	0	100
12	Alameda County	CA	Relatively High	95.28	0	100
13	Santa Clara County	CA	Relatively High	94.86	0	100
14	Inyo County	CA	Relatively High	94.76	0	100
15	Orange County	CA	Relatively Moderate	94.51	0	100
16	Contra Costa County	CA	Relatively Moderate	93.67	0	100
17	Tulare County	CA	Relatively Moderate	85.8	0	100
18	Madera County	CA	Relatively Moderate	82.11	0	100
19	Kings County	CA	Relatively Low	75.81	0	100
20	Imperial County	CA	Very Low	10.83	0	100

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Santa Cruz County	CA	\$1,535,420	Relatively High	Relatively High	1.18	\$1,480,602	99.55
2	Monterey County	CA	\$987,450	Very High	Relatively Low	1.37	\$1,169,486	99.45
3	Kern County	CA	\$608,770	Very High	Very Low	1.41	\$711,545	98.23
4	San Bernardino County	CA	\$509,034	Very High	Relatively Moderate	1.34	\$620,857	97.88
5	Ventura County	CA	\$460,409	Relatively High	Relatively Moderate	1.22	\$475,586	97.21
6	San Luis Obispo County	CA	\$357,227	Relatively Moderate	Very High	1.06	\$401,004	96.59
7	Fresno County	CA	\$319,055	Very High	Relatively Low	1.53	\$384,449	96.34
8	Los Angeles County	CA	\$353,430	Very High	Very Low	1.36	\$380,675	96.31
9	Santa Barbara County	CA	\$330,237	Very High	Relatively Moderate	1.21	\$357,585	96.05
10	Riverside County	CA	\$288,873	Very High	Relatively Low	1.34	\$354,711	95.89

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
11	San Diego County	CA	\$289,802	Relatively High	Very Low	1.2	\$333,639	95.7
12	Alameda County	CA	\$317,480	Relatively Moderate	Very High	1.13	\$299,284	95.28
13	Santa Clara County	CA	\$320,954	Relatively Low	Relatively High	1.11	\$286,718	94.86
14	Inyo County	CA	\$193,601	Relatively Moderate	Relatively Low	1.31	\$276,417	94.76
15	Orange County	CA	\$257,345	Relatively Moderate	Very Low	1.26	\$252,628	94.51
16	Contra Costa County	CA	\$232,345	Relatively Moderate	Relatively High	1.11	\$227,395	93.67
17	Tulare County	CA	\$101,039	Very High	Very Low	1.55	\$139,976	85.8
18	Madera County	CA	\$104,901	Very High	Very Low	1.41	\$125,388	82.11
19	Kings County	CA	\$38,301	Very High	Very Low	1.52	\$64,347	75.81
20	Imperial County	CA	\$4,890	Very High	Very Low	1.7	\$7,426	10.83

Lightning

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile	
1	Los Angeles County	CA	Relatively High	95.01	0	100
2	Contra Costa County	CA	Relatively Moderate	89.32	0	100
3	Kern County	CA	Relatively Moderate	86.81	0	100
4	Riverside County	CA	Relatively Moderate	77.96	0	100
5	San Bernardino County	CA	Relatively Moderate	76.67	0	100
6	San Diego County	CA	Relatively Moderate	74.68	0	100
7	Tulare County	CA	Relatively Moderate	72.14	0	100
8	Orange County	CA	Relatively Low	67.25	0	100
9	Fresno County	CA	Relatively Low	66.99	0	100
10	Monterey County	CA	Relatively Low	62.52	0	100
11	Ventura County	CA	Relatively Low	53.25	0	100
12	Madera County	CA	Relatively Low	53.12	0	100
13	Santa Cruz County	CA	Relatively Low	52.61	0	100
14	Kings County	CA	Relatively Low	43.53	0	100
15	San Luis Obispo County	CA	Very Low	24.77	0	100
16	Santa Barbara County	CA	Very Low	23.07	0	100
17	Alameda County	CA	Very Low	9.27	0	100
18	Santa Clara County	CA	Very Low	9.23	0	100
19	Inyo County	CA	Very Low	7.46	0	100
20	Imperial County	CA	Very Low	4.21	0	100

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Los Angeles County	CA	\$774,547	Very High	Very Low	1.36	\$1,104,707	95.01
2	Contra Costa County	CA	\$552,279	Relatively Moderate	Relatively High	1.11	\$630,520	89.32
3	Kern County	CA	\$367,329	Very High	Very Low	1.41	\$515,940	86.81
4	Riverside County	CA	\$223,851	Very High	Relatively Low	1.34	\$295,388	77.96
5	San Bernardino County	CA	\$204,087	Very High	Relatively Moderate	1.34	\$276,990	76.67
6	San Diego County	CA	\$200,344	Relatively High	Very Low	1.2	\$253,433	74.68
7	Tulare County	CA	\$143,592	Very High	Very Low	1.55	\$223,586	72.14
8	Orange County	CA	\$147,219	Relatively Moderate	Very Low	1.26	\$184,964	67.25
9	Fresno County	CA	\$127,022	Very High	Relatively Low	1.53	\$183,576	66.99
10	Monterey County	CA	\$118,364	Very High	Relatively Low	1.37	\$155,700	62.52

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
11	Ventura County	CA	\$96,997	Relatively High	Relatively Moderate	1.22	\$118,872	53.25
12	Madera County	CA	\$83,010	Very High	Very Low	1.41	\$118,596	53.12
13	Santa Cruz County	CA	\$97,984	Relatively High	Relatively High	1.18	\$117,152	52.61
14	Kings County	CA	\$57,310	Very High	Very Low	1.52	\$85,606	43.53
15	San Luis Obispo County	CA	\$43,593	Relatively Moderate	Very High	1.06	\$46,534	24.77
16	Santa Barbara County	CA	\$33,045	Very High	Relatively Moderate	1.21	\$42,690	23.07
17	Alameda County	CA	\$14,888	Relatively Moderate	Very High	1.13	\$17,202	9.27
18	Santa Clara County	CA	\$15,662	Relatively Low	Relatively High	1.11	\$17,155	9.23
19	Inyo County	CA	\$11,458	Relatively Moderate	Relatively Low	1.31	\$14,580	7.46
20	Imperial County	CA	\$5,229	Very High	Very Low	1.7	\$8,902	4.21

Riverine Flooding

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile	
1	Kern County	CA	Very High	99.59	0	100
2	Ventura County	CA	Relatively High	99.52	0	100
3	San Bernardino County	CA	Relatively High	99.36	0	100
4	Riverside County	CA	Relatively High	98.92	0	100
5	Fresno County	CA	Relatively High	98.82	0	100
6	Madera County	CA	Relatively High	98.79	0	100
7	Monterey County	CA	Relatively High	98.44	0	100
8	Tulare County	CA	Relatively High	98.15	0	100
9	Alameda County	CA	Relatively High	98.12	0	100
10	San Diego County	CA	Relatively High	96.88	0	100
11	Contra Costa County	CA	Relatively High	96.21	0	100
12	Orange County	CA	Relatively High	95.99	0	100
13	Kings County	CA	Relatively Moderate	94.75	0	100
14	Santa Cruz County	CA	Relatively Moderate	93.99	0	100
15	San Luis Obispo County	CA	Relatively Moderate	93.92	0	100
16	Santa Barbara County	CA	Relatively Moderate	91.31	0	100
17	Los Angeles County	CA	Relatively Moderate	90.84	0	100
18	Inyo County	CA	Relatively Moderate	87.72	0	100
19	Santa Clara County	CA	Relatively Moderate	75.41	0	100
20	Imperial County	CA	Relatively Low	70.95	0	100

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Kern County	CA	\$47,867,304	Very High	Very Low	1.41	\$72,069,983	99.59
2	Ventura County	CA	\$42,303,163	Relatively High	Relatively Moderate	1.22	\$54,069,269	99.52
3	San Bernardino County	CA	\$30,907,939	Very High	Relatively Moderate	1.34	\$42,775,664	99.36
4	Riverside County	CA	\$18,804,063	Very High	Relatively Low	1.34	\$27,982,149	98.92
5	Fresno County	CA	\$16,491,248	Very High	Relatively Low	1.53	\$25,232,318	98.82
6	Madera County	CA	\$16,775,085	Very High	Very Low	1.41	\$24,443,751	98.79
7	Monterey County	CA	\$15,116,494	Very High	Relatively Low	1.37	\$20,925,547	98.44
8	Tulare County	CA	\$12,219,834	Very High	Very Low	1.55	\$19,173,033	98.15
9	Alameda County	CA	\$16,403,623	Relatively Moderate	Very High	1.13	\$19,117,261	98.12
10	San Diego County	CA	\$9,869,173	Relatively High	Very Low	1.2	\$11,841,008	96.88

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
11	Contra Costa County	CA	\$8,420,628	Relatively Moderate	Relatively High	1.11	\$9,924,052	96.21
12	Orange County	CA	\$7,228,030	Relatively Moderate	Very Low	1.26	\$9,652,289	95.99
13	Kings County	CA	\$4,515,313	Very High	Very Low	1.52	\$7,203,790	94.75
14	Santa Cruz County	CA	\$4,810,188	Relatively High	Relatively High	1.18	\$6,098,998	93.99
15	San Luis Obispo County	CA	\$5,798,106	Relatively Moderate	Very High	1.06	\$6,072,983	93.92
16	Santa Barbara County	CA	\$3,684,051	Very High	Relatively Moderate	1.21	\$4,548,797	91.31
17	Los Angeles County	CA	\$3,225,724	Very High	Very Low	1.36	\$4,341,457	90.84
18	Inyo County	CA	\$2,565,105	Relatively Moderate	Relatively Low	1.31	\$3,245,753	87.72
19	Santa Clara County	CA	\$1,301,681	Relatively Low	Relatively High	1.11	\$1,485,035	75.41
20	Imperial County	CA	\$706,595	Very High	Very Low	1.7	\$1,205,895	70.95

Strong Wind

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile
1	Los Angeles County	CA	Relatively Moderate	73.46	
2	Riverside County	CA	Relatively Low	46.2	
3	San Diego County	CA	Relatively Low	45.53	
4	San Bernardino County	CA	Relatively Low	43.46	
5	Imperial County	CA	Relatively Low	36.84	
6	Orange County	CA	Relatively Low	36.68	
7	Ventura County	CA	Very Low	14.6	
8	Monterey County	CA	Very Low	11.61	
9	Tulare County	CA	Very Low	8.4	
10	Kern County	CA	Very Low	8.37	
11	Santa Barbara County	CA	Very Low	7.95	
12	Fresno County	CA	Very Low	7.83	
13	Contra Costa County	CA	Very Low	6.59	
14	Alameda County	CA	Very Low	6.49	
15	Santa Cruz County	CA	Very Low	6.01	
16	Santa Clara County	CA	Very Low	5.73	
17	Kings County	CA	Very Low	4.87	
18	Madera County	CA	Very Low	2.67	
19	San Luis Obispo County	CA	Very Low	2.58	
20	Inyo County	CA	Very Low	1.27	

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Los Angeles County	CA	\$569,654	Very High	Very Low	1.36	\$795,169	73.46
2	Riverside County	CA	\$260,521	Very High	Relatively Low	1.34	\$342,928	46.2
3	San Diego County	CA	\$275,332	Relatively High	Very Low	1.2	\$334,902	45.53
4	San Bernardino County	CA	\$233,745	Very High	Relatively Moderate	1.34	\$314,175	43.46
5	Imperial County	CA	\$156,546	Very High	Very Low	1.7	\$253,897	36.84
6	Orange County	CA	\$201,184	Relatively Moderate	Very Low	1.26	\$251,692	36.68
7	Ventura County	CA	\$59,041	Relatively High	Relatively Moderate	1.22	\$69,635	14.6
8	Monterey County	CA	\$36,432	Very High	Relatively Low	1.37	\$50,411	11.61
9	Tulare County	CA	\$21,263	Very High	Very Low	1.55	\$33,045	8.4
10	Kern County	CA	\$22,541	Very High	Very Low	1.41	\$32,948	8.37

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
11	Santa Barbara County	CA	\$24,155	Very High	Relatively Moderate	1.21	\$30,593	7.95
12	Fresno County	CA	\$20,538	Very High	Relatively Low	1.53	\$30,244	7.83
13	Contra Costa County	CA	\$20,594	Relatively Moderate	Relatively High	1.11	\$22,777	6.59
14	Alameda County	CA	\$20,036	Relatively Moderate	Very High	1.13	\$22,526	6.49
15	Santa Cruz County	CA	\$18,174	Relatively High	Relatively High	1.18	\$21,228	6.01
16	Santa Clara County	CA	\$17,449	Relatively Low	Relatively High	1.11	\$19,311	5.73
17	Kings County	CA	\$10,865	Very High	Very Low	1.52	\$16,114	4.87
18	Madera County	CA	\$4,919	Very High	Very Low	1.41	\$7,183	2.67
19	San Luis Obispo County	CA	\$6,276	Relatively Moderate	Very High	1.06	\$6,712	2.58
20	Inyo County	CA	\$1,349	Relatively Moderate	Relatively Low	1.31	\$1,778	1.27










Tornado

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile
1	Los Angeles County	CA	Relatively High	97.61	
2	Riverside County	CA	Relatively Moderate	89.47	
3	Orange County	CA	Relatively Moderate	87.4	
4	San Bernardino County	CA	Relatively Moderate	83.17	
5	San Diego County	CA	Relatively Moderate	70.73	
6	Alameda County	CA	Relatively Moderate	70.12	
7	Santa Clara County	CA	Relatively Low	62.58	
8	Fresno County	CA	Relatively Low	61.57	
9	Contra Costa County	CA	Relatively Low	55.01	
10	Ventura County	CA	Relatively Low	46.71	
11	Tulare County	CA	Relatively Low	33.44	
12	Monterey County	CA	Relatively Low	29.91	
13	Santa Cruz County	CA	Very Low	21.03	
14	Kern County	CA	Very Low	20.55	
15	Madera County	CA	Very Low	18.93	
16	Kings County	CA	Very Low	17.37	
17	Imperial County	CA	Very Low	11.68	
18	San Luis Obispo County	CA	Very Low	6.49	
19	Santa Barbara County	CA	Very Low	5.35	
20	Inyo County	CA	Very Low	2.51	

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Los Angeles County	CA	\$16,313,687	Very High	Very Low	1.36	\$21,880,211	97.61
2	Riverside County	CA	\$5,237,380	Very High	Relatively Low	1.34	\$6,816,650	89.47
3	Orange County	CA	\$4,799,429	Relatively Moderate	Very Low	1.26	\$5,847,332	87.4
4	San Bernardino County	CA	\$3,398,026	Very High	Relatively Moderate	1.34	\$4,548,618	83.17
5	San Diego County	CA	\$2,054,719	Relatively High	Very Low	1.2	\$2,466,557	70.73
6	Alameda County	CA	\$2,198,340	Relatively Moderate	Very High	1.13	\$2,408,097	70.12
7	Santa Clara County	CA	\$1,656,579	Relatively Low	Relatively High	1.11	\$1,806,927	62.58
8	Fresno County	CA	\$1,205,383	Very High	Relatively Low	1.53	\$1,740,237	61.57
9	Contra Costa County	CA	\$1,291,507	Relatively Moderate	Relatively High	1.11	\$1,392,140	55.01
10	Ventura County	CA	\$904,142	Relatively High	Relatively Moderate	1.22	\$1,050,511	46.71

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
11	Tulare County	CA	\$391,034	Very High	Very Low	1.55	\$596,278	33.44
12	Monterey County	CA	\$368,442	Very High	Relatively Low	1.37	\$492,456	29.91
13	Santa Cruz County	CA	\$212,599	Relatively High	Relatively High	1.18	\$246,749	21.03
14	Kern County	CA	\$168,097	Very High	Very Low	1.41	\$233,087	20.55
15	Madera County	CA	\$141,258	Very High	Very Low	1.41	\$204,042	18.93
16	Kings County	CA	\$121,656	Very High	Very Low	1.52	\$177,574	17.37
17	Imperial County	CA	\$48,967	Very High	Very Low	1.7	\$82,110	11.68
18	San Luis Obispo County	CA	\$26,612	Relatively Moderate	Very High	1.06	\$28,920	6.49
19	Santa Barbara County	CA	\$17,396	Very High	Relatively Moderate	1.21	\$21,381	5.35
20	Inyo County	CA	\$3,995	Relatively Moderate	Relatively Low	1.31	\$4,880	2.51

Tsunami

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile
1	Santa Cruz County	CA	Relatively Moderate	87.84	0  100
2	Monterey County	CA	Relatively Moderate	75.68	0  100
3	Alameda County	CA	Relatively Moderate	71.62	0  100
4	Contra Costa County	CA	Relatively Moderate	66.22	0  100
5	Los Angeles County	CA	Relatively Moderate	63.51	0  100
6	Orange County	CA	Relatively Low	56.76	0  100
7	San Diego County	CA	Relatively Low	50	0  100
8	San Luis Obispo County	CA	Relatively Low	48.65	0  100
9	Ventura County	CA	Relatively Low	45.95	0  100
10	Santa Barbara County	CA	Relatively Low	43.24	0  100
11	Santa Clara County	CA	Very Low	25.68	0  100
	Fresno County	CA	Not Applicable		
	Imperial County	CA	Not Applicable		
	Inyo County	CA	Not Applicable		
	Kern County	CA	Not Applicable		
	Kings County	CA	Not Applicable		
	Madera County	CA	Not Applicable		
	Riverside County	CA	Not Applicable		
	San Bernardino County	CA	Not Applicable		
	Tulare County	CA	Not Applicable		

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Santa Cruz County	CA	\$111,064	Relatively High	Relatively High	1.18	\$143,153	87.84
2	Monterey County	CA	\$59,112	Very High	Relatively Low	1.37	\$67,482	75.68
3	Alameda County	CA	\$46,364	Relatively Moderate	Very High	1.13	\$56,120	71.62
4	Contra Costa County	CA	\$40,671	Relatively Moderate	Relatively High	1.11	\$41,056	66.22
5	Los Angeles County	CA	\$33,535	Very High	Very Low	1.36	\$32,059	63.51
6	Orange County	CA	\$11,837	Relatively Moderate	Very Low	1.26	\$10,338	56.76
7	San Diego County	CA	\$7,080	Relatively High	Very Low	1.2	\$7,042	50
8	San Luis Obispo County	CA	\$7,287	Relatively Moderate	Very High	1.06	\$6,934	48.65
9	Ventura County	CA	\$5,552	Relatively High	Relatively Moderate	1.22	\$5,383	45.95
10	Santa Barbara County	CA	\$3,891	Very High	Relatively Moderate	1.21	\$4,282	43.24

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
11	Santa Clara County	CA	\$195	Relatively Low	Relatively High	1.11	\$224	25.68
	Fresno County	CA	N/A	Very High	Relatively Low	1.53	N/A	N/A
	Imperial County	CA	N/A	Very High	Very Low	1.7	N/A	N/A
	Inyo County	CA	N/A	Relatively Moderate	Relatively Low	1.31	N/A	N/A
	Kern County	CA	N/A	Very High	Very Low	1.41	N/A	N/A
	Kings County	CA	N/A	Very High	Very Low	1.52	N/A	N/A
	Madera County	CA	N/A	Very High	Very Low	1.41	N/A	N/A
	Riverside County	CA	N/A	Very High	Relatively Low	1.34	N/A	N/A
	San Bernardino County	CA	N/A	Very High	Relatively Moderate	1.34	N/A	N/A
	Tulare County	CA	N/A	Very High	Very Low	1.55	N/A	N/A

Volcanic Activity

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile
1	Madera County	CA	Relatively Low	53.93	
2	Inyo County	CA	Relatively Low	48.31	
3	Fresno County	CA	Very Low	29.21	
	Alameda County	CA	Not Applicable		
	Contra Costa County	CA	Not Applicable		
	Imperial County	CA	Not Applicable		
	Kern County	CA	Not Applicable		
	Kings County	CA	Not Applicable		
	Los Angeles County	CA	Not Applicable		
	Monterey County	CA	Not Applicable		
	Orange County	CA	Not Applicable		
	Riverside County	CA	Not Applicable		
	San Bernardino County	CA	Not Applicable		
	San Diego County	CA	Not Applicable		
	San Luis Obispo County	CA	Not Applicable		
	Santa Barbara County	CA	Not Applicable		
	Santa Clara County	CA	Not Applicable		
	Santa Cruz County	CA	Not Applicable		
	Tulare County	CA	Not Applicable		
	Ventura County	CA	Not Applicable		

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Madera County	CA	\$105,133	Very High	Very Low	1.41	\$137,977	53.93
2	Inyo County	CA	\$71,166	Relatively Moderate	Relatively Low	1.31	\$89,468	48.31
3	Fresno County	CA	\$3,928	Very High	Relatively Low	1.53	\$4,316	29.21
	Alameda County	CA	N/A	Relatively Moderate	Very High	1.13	N/A	N/A
	Contra Costa County	CA	N/A	Relatively Moderate	Relatively High	1.11	N/A	N/A
	Imperial County	CA	N/A	Very High	Very Low	1.7	N/A	N/A
	Kern County	CA	N/A	Very High	Very Low	1.41	N/A	N/A
	Kings County	CA	N/A	Very High	Very Low	1.52	N/A	N/A
	Los Angeles County	CA	N/A	Very High	Very Low	1.36	N/A	N/A
	Monterey County	CA	N/A	Very High	Relatively Low	1.37	N/A	N/A

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
	Orange County	CA	N/A	Relatively Moderate	Very Low	1.26	N/A	N/A
	Riverside County	CA	N/A	Very High	Relatively Low	1.34	N/A	N/A
	San Bernardino County	CA	N/A	Very High	Relatively Moderate	1.34	N/A	N/A
	San Diego County	CA	N/A	Relatively High	Very Low	1.2	N/A	N/A
	San Luis Obispo County	CA	N/A	Relatively Moderate	Very High	1.06	N/A	N/A
	Santa Barbara County	CA	N/A	Very High	Relatively Moderate	1.21	N/A	N/A
	Santa Clara County	CA	N/A	Relatively Low	Relatively High	1.11	N/A	N/A
	Santa Cruz County	CA	N/A	Relatively High	Relatively High	1.18	N/A	N/A
	Tulare County	CA	N/A	Very High	Very Low	1.55	N/A	N/A
	Ventura County	CA	N/A	Relatively High	Relatively Moderate	1.22	N/A	N/A

Wildfire

Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile	
1	San Diego County	CA	Very High	100	0	100
2	Riverside County	CA	Very High	99.97	0	100
3	San Bernardino County	CA	Very High	99.94	0	100
4	Los Angeles County	CA	Very High	99.9	0	100
5	Ventura County	CA	Relatively High	99.81	0	100
6	Orange County	CA	Relatively High	99.78	0	100
7	Kern County	CA	Relatively High	99.65	0	100
8	Madera County	CA	Relatively High	99.55	0	100
9	Santa Barbara County	CA	Relatively High	99.52	0	100
10	Fresno County	CA	Relatively High	98.35	0	100
11	San Luis Obispo County	CA	Relatively High	97.8	0	100
12	Santa Cruz County	CA	Relatively High	97.68	0	100
13	Tulare County	CA	Relatively High	97.55	0	100
14	Monterey County	CA	Relatively High	97.49	0	100
15	Santa Clara County	CA	Relatively High	96.91	0	100
16	Alameda County	CA	Relatively Moderate	96.18	0	100
17	Contra Costa County	CA	Relatively Moderate	95.93	0	100
18	Inyo County	CA	Relatively Low	76.58	0	100
19	Kings County	CA	Relatively Low	64.52	0	100
20	Imperial County	CA	Very Low	58.96	0	100

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	San Diego County	CA	\$381,629,724	Relatively High	Very Low	1.2	\$445,037,091	100
2	Riverside County	CA	\$319,123,716	Very High	Relatively Low	1.34	\$398,534,350	99.97
3	San Bernardino County	CA	\$134,371,346	Very High	Relatively Moderate	1.34	\$147,460,270	99.94
4	Los Angeles County	CA	\$108,835,472	Very High	Very Low	1.36	\$110,453,363	99.9
5	Ventura County	CA	\$48,353,567	Relatively High	Relatively Moderate	1.22	\$53,155,787	99.81
6	Orange County	CA	\$49,545,003	Relatively Moderate	Very Low	1.26	\$45,718,477	99.78
7	Kern County	CA	\$27,849,354	Very High	Very Low	1.41	\$32,500,938	99.65
8	Madera County	CA	\$20,122,138	Very High	Very Low	1.41	\$25,529,099	99.55
9	Santa Barbara County	CA	\$23,953,369	Very High	Relatively Moderate	1.21	\$24,650,076	99.52
10	Fresno County	CA	\$11,338,096	Very High	Relatively Low	1.53	\$13,146,062	98.35

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
11	San Luis Obispo County	CA	\$9,706,413	Relatively Moderate	Very High	1.06	\$10,002,171	97.8
12	Santa Cruz County	CA	\$10,020,499	Relatively High	Relatively High	1.18	\$9,482,859	97.68
13	Tulare County	CA	\$6,151,930	Very High	Very Low	1.55	\$8,840,685	97.55
14	Monterey County	CA	\$7,834,255	Very High	Relatively Low	1.37	\$8,634,245	97.49
15	Santa Clara County	CA	\$8,439,204	Relatively Low	Relatively High	1.11	\$7,340,947	96.91
16	Alameda County	CA	\$6,731,674	Relatively Moderate	Very High	1.13	\$5,679,284	96.18
17	Contra Costa County	CA	\$5,828,404	Relatively Moderate	Relatively High	1.11	\$5,072,184	95.93
18	Inyo County	CA	\$305,607	Relatively Moderate	Relatively Low	1.31	\$370,537	76.58
19	Kings County	CA	\$69,768	Very High	Very Low	1.52	\$110,651	64.52
20	Imperial County	CA	\$48,763	Very High	Very Low	1.7	\$73,621	58.96

Winter Weather

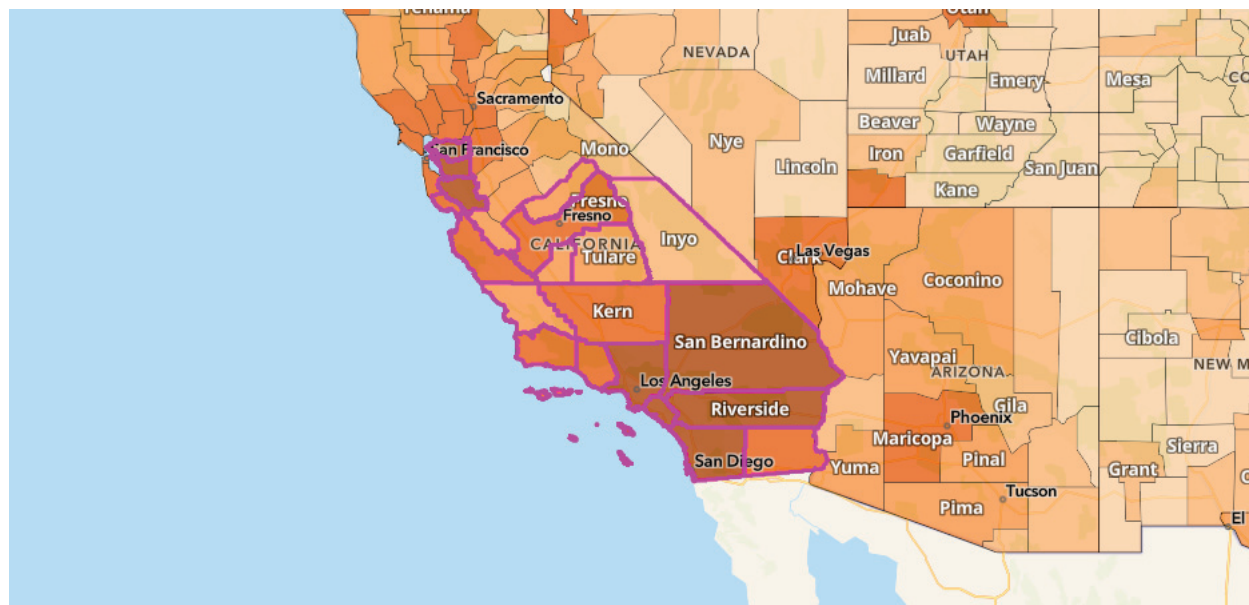
Rank	Community	State	Risk Index Rating	Risk Index Score	National Percentile
1	Los Angeles County	CA	Relatively Low	48.55	
2	Riverside County	CA	Relatively Low	31.78	
3	San Diego County	CA	Very Low	23.54	
4	Madera County	CA	Very Low	22.97	
5	Inyo County	CA	Very Low	15.3	
6	San Bernardino County	CA	Very Low	15.24	
7	Kern County	CA	Very Low	11.87	
8	Tulare County	CA	Very Low	8.59	
9	Fresno County	CA	Very Low	2.61	
10	Ventura County	CA	Very Low	2.13	
11	Monterey County	CA	Very Low	2.1	
12	Santa Barbara County	CA	Very Low	2	
13	Orange County	CA	Very Low	1.97	
14	San Luis Obispo County	CA	Very Low	1.85	
15	Contra Costa County	CA	Very Low	1.78	
16	Santa Clara County	CA	Very Low	1.65	
17	Alameda County	CA	Very Low	1.62	
18	Imperial County	CA	Very Low	1.59	
	Kings County	CA	No Rating	0	
	Santa Cruz County	CA	No Rating	0	

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
1	Los Angeles County	CA	\$46,516	Very High	Very Low	1.36	\$56,395	48.55
2	Riverside County	CA	\$20,604	Very High	Relatively Low	1.34	\$27,903	31.78
3	San Diego County	CA	\$15,183	Relatively High	Very Low	1.2	\$19,241	23.54
4	Madera County	CA	\$14,311	Very High	Very Low	1.41	\$18,646	22.97
5	Inyo County	CA	\$9,022	Relatively Moderate	Relatively Low	1.31	\$11,174	15.3
6	San Bernardino County	CA	\$9,416	Very High	Relatively Moderate	1.34	\$11,157	15.24
7	Kern County	CA	\$6,586	Very High	Very Low	1.41	\$8,137	11.87
8	Tulare County	CA	\$4,184	Very High	Very Low	1.55	\$5,785	8.59
9	Fresno County	CA	\$797	Very High	Relatively Low	1.53	\$922	2.61
10	Ventura County	CA	\$124	Relatively High	Relatively Moderate	1.22	\$177	2.13

Rank	Community	State	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
11	Monterey County	CA	\$144	Very High	Relatively Low	1.37	\$146	2.1
12	Santa Barbara County	CA	\$58	Very High	Relatively Moderate	1.21	\$54	2
13	Orange County	CA	\$52	Relatively Moderate	Very Low	1.26	\$45	1.97
14	San Luis Obispo County	CA	\$1	Relatively Moderate	Very High	1.06	\$0	1.85
15	Contra Costa County	CA	\$0	Relatively Moderate	Relatively High	1.11	\$0	1.78
16	Santa Clara County	CA	\$0	Relatively Low	Relatively High	1.11	\$0	1.65
17	Alameda County	CA	\$0	Relatively Moderate	Very High	1.13	\$0	1.62
18	Imperial County	CA	\$0	Very High	Very Low	1.7	\$0	1.59
	Kings County	CA	\$0	Very High	Very Low	1.52	\$0	0
	Santa Cruz County	CA	\$0	Relatively High	Relatively High	1.18	\$0	0

Expected Annual Loss

Expected Annual Loss measures the expected loss each year due to natural hazards.



Expected Annual Loss Legend

- Very High
- Relatively High
- Relatively Moderate
- Relatively Low
- Very Low
- No Expected Annual Losses
- Not Applicable
- Insufficient Data

Rank	Community	State	EAL Value	Score
1	Los Angeles County	CA	\$3,916,212,454	100
2	Santa Clara County	CA	\$1,219,166,643	99.94
3	Alameda County	CA	\$1,212,128,362	99.91
4	Riverside County	CA	\$1,190,667,489	99.88
5	San Bernardino County	CA	\$1,137,542,458	99.85
6	Orange County	CA	\$989,276,586	99.81
7	San Diego County	CA	\$799,862,388	99.69
8	Contra Costa County	CA	\$596,515,813	99.63
9	Ventura County	CA	\$395,627,536	99.35
10	Santa Barbara County	CA	\$381,123,805	99.29
11	Kern County	CA	\$246,718,363	98.51
12	Monterey County	CA	\$192,004,893	98.11
13	Santa Cruz County	CA	\$168,322,253	97.77
14	Fresno County	CA	\$151,424,722	97.12
15	Imperial County	CA	\$135,567,859	96.75

Rank	Community	State	EAL Value	Score
16	Tulare County	CA	\$75,528,558	94.34
17	San Luis Obispo County	CA	\$66,456,913	93.59
18	Madera County	CA	\$63,720,373	93.31
19	Kings County	CA	\$32,860,353	88.12
20	Inyo County	CA	\$12,367,524	72.33

Expected Annual Loss for Hazard Types

Expected Annual Loss scores for hazard types are calculated using data for only a single hazard type, and reflect a community's relative expected annual loss for only that hazard type.

Avalanche

Rank	Community	State	EAL Value	Score
1	Inyo County	CA	\$368,508	75.0
2	Los Angeles County	CA	\$61,612	39.9
2	San Diego County	CA	\$61,612	39.9
2	Tulare County	CA	\$61,612	39.9
5	San Bernardino County	CA	\$47,206	13.0
6	Fresno County	CA	\$36,967	12.0
6	Madera County	CA	\$36,967	12.0
	Alameda County	CA	N/A	--
	Contra Costa County	CA	N/A	--
	Imperial County	CA	N/A	--
	Kern County	CA	N/A	--
	Kings County	CA	N/A	--
	Monterey County	CA	N/A	--
	Orange County	CA	N/A	--
	Riverside County	CA	N/A	--
	San Luis Obispo County	CA	N/A	--
	Santa Barbara County	CA	N/A	--
	Santa Clara County	CA	N/A	--
	Santa Cruz County	CA	N/A	--
	Ventura County	CA	N/A	--

Coastal Flooding

Rank	Community	State	EAL Value	Score
1	Santa Clara County	CA	\$1,001,237	75.0
2	Alameda County	CA	\$875,558	74.0
3	Contra Costa County	CA	\$188,681	56.8
4	Santa Barbara County	CA	\$105,405	50.8
5	Orange County	CA	\$72,431	47.9
6	Monterey County	CA	\$62,726	47.4
7	Los Angeles County	CA	\$60,661	46.7
8	San Luis Obispo County	CA	\$20,349	37.4
9	San Diego County	CA	\$19,342	36.8
10	Santa Cruz County	CA	\$17,591	35.6
11	Ventura County	CA	\$6,463	30.9
	Fresno County	CA	N/A	--
	Imperial County	CA	N/A	--
	Inyo County	CA	N/A	--
	Kern County	CA	N/A	--
	Kings County	CA	N/A	--
	Madera County	CA	N/A	--
	Riverside County	CA	N/A	--
	San Bernardino County	CA	N/A	--
	Tulare County	CA	N/A	--

Cold Wave

Rank	Community	State	EAL Value	Score
1	Inyo County	CA	\$0	28.9
	Alameda County	CA	\$0	0.0
	Contra Costa County	CA	\$0	0.0
	Fresno County	CA	\$0	0.0
	Imperial County	CA	\$0	0.0
	Kern County	CA	\$0	0.0
	Kings County	CA	\$0	0.0
	Los Angeles County	CA	\$0	0.0
	Madera County	CA	\$0	0.0
	Monterey County	CA	\$0	0.0
	Orange County	CA	\$0	0.0
	Riverside County	CA	\$0	0.0
	San Bernardino County	CA	\$0	0.0
	San Diego County	CA	\$0	0.0
	San Luis Obispo County	CA	\$0	0.0
	Santa Barbara County	CA	\$0	0.0
	Santa Clara County	CA	\$0	0.0
	Santa Cruz County	CA	\$0	0.0
	Tulare County	CA	\$0	0.0
	Ventura County	CA	\$0	0.0

Drought

Rank	Community	State	EAL Value	Score
1	Santa Barbara County	CA	\$214,679,980	100.0
2	Fresno County	CA	\$19,475,317	99.6
3	Monterey County	CA	\$17,876,569	99.6
4	Contra Costa County	CA	\$10,774,431	99.4
5	Alameda County	CA	\$5,853,075	99.0
6	Madera County	CA	\$5,516,976	98.9
7	Kings County	CA	\$4,073,294	98.7
8	San Luis Obispo County	CA	\$3,689,787	98.6
9	Kern County	CA	\$3,287,242	98.4
10	Tulare County	CA	\$1,997,962	97.8
11	Santa Cruz County	CA	\$1,932,724	97.8
12	Ventura County	CA	\$1,741,402	97.5
13	Santa Clara County	CA	\$1,124,041	95.8
14	San Diego County	CA	\$562,808	89.8
15	Imperial County	CA	\$550,023	89.6
16	Riverside County	CA	\$375,065	85.6
17	Los Angeles County	CA	\$142,015	73.4
18	Orange County	CA	\$70,453	63.7
19	San Bernardino County	CA	\$62,559	62.4
20	Inyo County	CA	\$1,305	24.9

Earthquake

Rank	Community	State	EAL Value	Score
1	Los Angeles County	CA	\$3,780,351,907	100.0
2	Santa Clara County	CA	\$1,201,001,769	100.0
3	Alameda County	CA	\$1,178,189,306	99.9
4	San Bernardino County	CA	\$964,152,496	99.9
5	Orange County	CA	\$926,116,576	99.9
6	Riverside County	CA	\$838,629,250	99.8
7	Contra Costa County	CA	\$566,466,572	99.8
8	San Diego County	CA	\$400,134,231	99.7
9	Ventura County	CA	\$301,415,004	99.7
10	Kern County	CA	\$162,079,535	99.4
11	Santa Cruz County	CA	\$149,330,344	99.3
12	Monterey County	CA	\$148,896,192	99.3
13	Santa Barbara County	CA	\$137,868,164	99.2
14	Imperial County	CA	\$131,508,432	99.2
15	Fresno County	CA	\$88,190,821	98.9
16	San Luis Obispo County	CA	\$46,275,882	98.3
17	Tulare County	CA	\$34,327,010	97.9
18	Kings County	CA	\$18,928,719	96.7
19	Madera County	CA	\$13,095,612	95.9
20	Inyo County	CA	\$8,305,550	94.5

Hail

Rank	Community	State	EAL Value	Score
1	Fresno County	CA	\$1,341,822	92.6
2	Tulare County	CA	\$624,358	84.9
3	Kern County	CA	\$292,913	74.4
4	Madera County	CA	\$197,348	66.9
5	Santa Clara County	CA	\$137,982	60.1
6	San Bernardino County	CA	\$131,055	58.7
7	Alameda County	CA	\$125,811	57.9
8	Los Angeles County	CA	\$72,737	46.4
9	Kings County	CA	\$57,311	41.1
10	Contra Costa County	CA	\$54,531	40.1
11	Orange County	CA	\$31,814	29.7
12	San Luis Obispo County	CA	\$28,109	27.5
13	Riverside County	CA	\$24,529	25.4
14	San Diego County	CA	\$22,389	23.6
15	Santa Barbara County	CA	\$16,052	19.1
16	Monterey County	CA	\$14,464	17.7
17	Ventura County	CA	\$11,007	14.7
18	Imperial County	CA	\$10,293	14.2
19	Santa Cruz County	CA	\$8,092	12.0
20	Inyo County	CA	\$405	2.3

Heat Wave

Rank	Community	State	EAL Value	Score
1	Tulare County	CA	\$19,484,740	99.5
2	Fresno County	CA	\$12,873,728	99.3
3	Riverside County	CA	\$7,651,092	98.6
4	Madera County	CA	\$7,522,714	98.5
5	Los Angeles County	CA	\$5,370,958	98.1
6	Kings County	CA	\$4,987,815	97.9
7	San Diego County	CA	\$4,692,911	97.9
8	Kern County	CA	\$4,168,692	97.5
9	Santa Clara County	CA	\$4,149,888	97.4
10	San Bernardino County	CA	\$3,515,550	96.9
11	Contra Costa County	CA	\$2,645,169	96.1
12	Imperial County	CA	\$2,517,972	95.9
13	Alameda County	CA	\$1,352,208	92.9
14	Orange County	CA	\$795,214	88.2
15	Monterey County	CA	\$634,249	85.7
16	Inyo County	CA	\$530,454	82.8
17	San Luis Obispo County	CA	\$497,272	81.9
18	Santa Barbara County	CA	\$408,001	78.6
19	Ventura County	CA	\$270,664	72.7
20	Santa Cruz County	CA	\$227,573	70.0

Hurricane

Rank	Community	State	EAL Value	Score
1	Riverside County	CA	\$28,544	24.7
2	San Diego County	CA	\$27,738	24.3
3	Imperial County	CA	\$10,148	11.8
	Alameda County	CA	N/A	--
	Contra Costa County	CA	N/A	--
	Fresno County	CA	N/A	--
	Inyo County	CA	N/A	--
	Kern County	CA	N/A	--
	Kings County	CA	N/A	--
	Los Angeles County	CA	N/A	--
	Madera County	CA	N/A	--
	Monterey County	CA	N/A	--
	Orange County	CA	N/A	--
	San Bernardino County	CA	N/A	--
	San Luis Obispo County	CA	N/A	--
	Santa Barbara County	CA	N/A	--
	Santa Clara County	CA	N/A	--
	Santa Cruz County	CA	N/A	--
	Tulare County	CA	N/A	--
	Ventura County	CA	N/A	--

Ice Storm

Rank	Community	State	EAL Value	Score
	Alameda County	CA	N/A	--
	Contra Costa County	CA	N/A	--
	Fresno County	CA	N/A	--
	Imperial County	CA	N/A	--
	Inyo County	CA	N/A	--
	Kern County	CA	N/A	--
	Kings County	CA	N/A	--
	Los Angeles County	CA	N/A	--
	Madera County	CA	N/A	--
	Monterey County	CA	N/A	--
	Orange County	CA	N/A	--
	Riverside County	CA	N/A	--
	San Bernardino County	CA	N/A	--
	San Diego County	CA	N/A	--
	San Luis Obispo County	CA	N/A	--
	Santa Barbara County	CA	N/A	--
	Santa Clara County	CA	N/A	--
	Santa Cruz County	CA	N/A	--
	Tulare County	CA	N/A	--
	Ventura County	CA	N/A	--

Landslide

Rank	Community	State	EAL Value	Score
1	Santa Cruz County	CA	\$1,535,420	99.7
2	Monterey County	CA	\$987,450	99.3
3	Kern County	CA	\$608,770	98.2
4	San Bernardino County	CA	\$509,034	97.7
5	Ventura County	CA	\$460,409	97.5
6	San Luis Obispo County	CA	\$357,227	96.6
7	Los Angeles County	CA	\$353,430	96.5
8	Santa Barbara County	CA	\$330,237	96.2
9	Santa Clara County	CA	\$320,954	95.9
10	Fresno County	CA	\$319,055	95.9
11	Alameda County	CA	\$317,480	95.9
12	San Diego County	CA	\$289,802	95.5
13	Riverside County	CA	\$288,873	95.5
14	Orange County	CA	\$257,345	95.1
15	Contra Costa County	CA	\$232,345	94.6
16	Inyo County	CA	\$193,601	93.4
17	Madera County	CA	\$104,901	79.4
18	Tulare County	CA	\$101,039	79.3
19	Kings County	CA	\$38,301	74.1
20	Imperial County	CA	\$4,890	9.3

Lightning

Rank	Community	State	EAL Value	Score
1	Los Angeles County	CA	\$774,547	93.2
2	Contra Costa County	CA	\$552,279	89.2
3	Kern County	CA	\$367,329	84.1
4	Riverside County	CA	\$223,851	75.4
5	San Bernardino County	CA	\$204,087	73.9
6	San Diego County	CA	\$200,344	73.5
7	Orange County	CA	\$147,219	65.9
8	Tulare County	CA	\$143,592	65.1
9	Fresno County	CA	\$127,022	61.7
10	Monterey County	CA	\$118,364	59.6
11	Santa Cruz County	CA	\$97,984	53.1
12	Ventura County	CA	\$96,997	52.7
13	Madera County	CA	\$83,010	48.0
14	Kings County	CA	\$57,310	36.5
15	San Luis Obispo County	CA	\$43,593	27.7
16	Santa Barbara County	CA	\$33,045	22.0
17	Santa Clara County	CA	\$15,662	10.2
18	Alameda County	CA	\$14,888	9.5
19	Inyo County	CA	\$11,458	6.8
20	Imperial County	CA	\$5,229	2.8

Riverine Flooding

Rank	Community	State	EAL Value	Score
1	Kern County	CA	\$47,867,304	99.5
2	Ventura County	CA	\$42,303,163	99.4
3	San Bernardino County	CA	\$30,907,939	99.2
4	Riverside County	CA	\$18,804,063	98.5
5	Madera County	CA	\$16,775,085	98.4
6	Fresno County	CA	\$16,491,248	98.4
7	Alameda County	CA	\$16,403,623	98.3
8	Monterey County	CA	\$15,116,494	98.0
9	Tulare County	CA	\$12,219,834	97.5
10	San Diego County	CA	\$9,869,173	96.8
11	Contra Costa County	CA	\$8,420,628	96.3
12	Orange County	CA	\$7,228,030	95.6
13	San Luis Obispo County	CA	\$5,798,106	94.5
14	Santa Cruz County	CA	\$4,810,188	93.3
15	Kings County	CA	\$4,515,313	92.7
16	Santa Barbara County	CA	\$3,684,051	91.0
17	Los Angeles County	CA	\$3,225,724	89.8
18	Inyo County	CA	\$2,565,105	87.0
19	Santa Clara County	CA	\$1,301,681	75.9
20	Imperial County	CA	\$706,595	63.3

Strong Wind

Rank	Community	State	EAL Value	Score
1	Los Angeles County	CA	\$569,654	69.4
2	San Diego County	CA	\$275,332	46.7
3	Riverside County	CA	\$260,521	44.8
4	San Bernardino County	CA	\$233,745	41.4
5	Orange County	CA	\$201,184	37.3
6	Imperial County	CA	\$156,546	31.6
7	Ventura County	CA	\$59,041	17.2
8	Monterey County	CA	\$36,432	12.8
9	Santa Barbara County	CA	\$24,155	10.1
10	Kern County	CA	\$22,541	9.8
11	Tulare County	CA	\$21,263	9.5
12	Contra Costa County	CA	\$20,594	9.4
13	Fresno County	CA	\$20,538	9.3
14	Alameda County	CA	\$20,036	9.1
15	Santa Cruz County	CA	\$18,174	8.5
16	Santa Clara County	CA	\$17,449	8.3
17	Kings County	CA	\$10,865	6.5
18	San Luis Obispo County	CA	\$6,276	5.2
19	Madera County	CA	\$4,919	4.8
20	Inyo County	CA	\$1,349	3.7

Tornado

Rank	Community	State	EAL Value	Score
1	Los Angeles County	CA	\$16,313,687	97.0
2	Riverside County	CA	\$5,237,380	88.1
3	Orange County	CA	\$4,799,429	86.8
4	San Bernardino County	CA	\$3,398,026	81.4
5	Alameda County	CA	\$2,198,340	72.6
6	San Diego County	CA	\$2,054,719	70.9
7	Santa Clara County	CA	\$1,656,579	66.2
8	Contra Costa County	CA	\$1,291,507	58.8
9	Fresno County	CA	\$1,205,383	56.8
10	Ventura County	CA	\$904,142	48.4
11	Tulare County	CA	\$391,034	31.1
12	Monterey County	CA	\$368,442	30.0
13	Santa Cruz County	CA	\$212,599	23.4
14	Kern County	CA	\$168,097	20.7
15	Madera County	CA	\$141,258	18.8
16	Kings County	CA	\$121,656	17.4
17	Imperial County	CA	\$48,967	11.8
18	San Luis Obispo County	CA	\$26,612	8.7
19	Santa Barbara County	CA	\$17,396	7.0
20	Inyo County	CA	\$3,995	2.6

Tsunami

Rank	Community	State	EAL Value	Score
1	Santa Cruz County	CA	\$111,064	93.0
2	Monterey County	CA	\$59,112	85.9
3	Alameda County	CA	\$46,364	84.4
4	Contra Costa County	CA	\$40,671	82.0
5	Los Angeles County	CA	\$33,535	78.9
6	Orange County	CA	\$11,837	73.4
7	San Luis Obispo County	CA	\$7,287	68.0
8	San Diego County	CA	\$7,080	67.2
9	Ventura County	CA	\$5,552	65.6
10	Santa Barbara County	CA	\$3,891	62.5
11	Santa Clara County	CA	\$195	42.2
	Fresno County	CA	N/A	--
	Imperial County	CA	N/A	--
	Inyo County	CA	N/A	--
	Kern County	CA	N/A	--
	Kings County	CA	N/A	--
	Madera County	CA	N/A	--
	Riverside County	CA	N/A	--
	San Bernardino County	CA	N/A	--
	Tulare County	CA	N/A	--

Volcanic Activity

Rank	Community	State	EAL Value	Score
1	Madera County	CA	\$105,133	62.3
2	Inyo County	CA	\$71,166	57.5
3	Fresno County	CA	\$3,928	39.6
	Alameda County	CA	N/A	--
	Contra Costa County	CA	N/A	--
	Imperial County	CA	N/A	--
	Kern County	CA	N/A	--
	Kings County	CA	N/A	--
	Los Angeles County	CA	N/A	--
	Monterey County	CA	N/A	--
	Orange County	CA	N/A	--
	Riverside County	CA	N/A	--
	San Bernardino County	CA	N/A	--
	San Diego County	CA	N/A	--
	San Luis Obispo County	CA	N/A	--
	Santa Barbara County	CA	N/A	--
	Santa Clara County	CA	N/A	--
	Santa Cruz County	CA	N/A	--
	Tulare County	CA	N/A	--
	Ventura County	CA	N/A	--

Wildfire

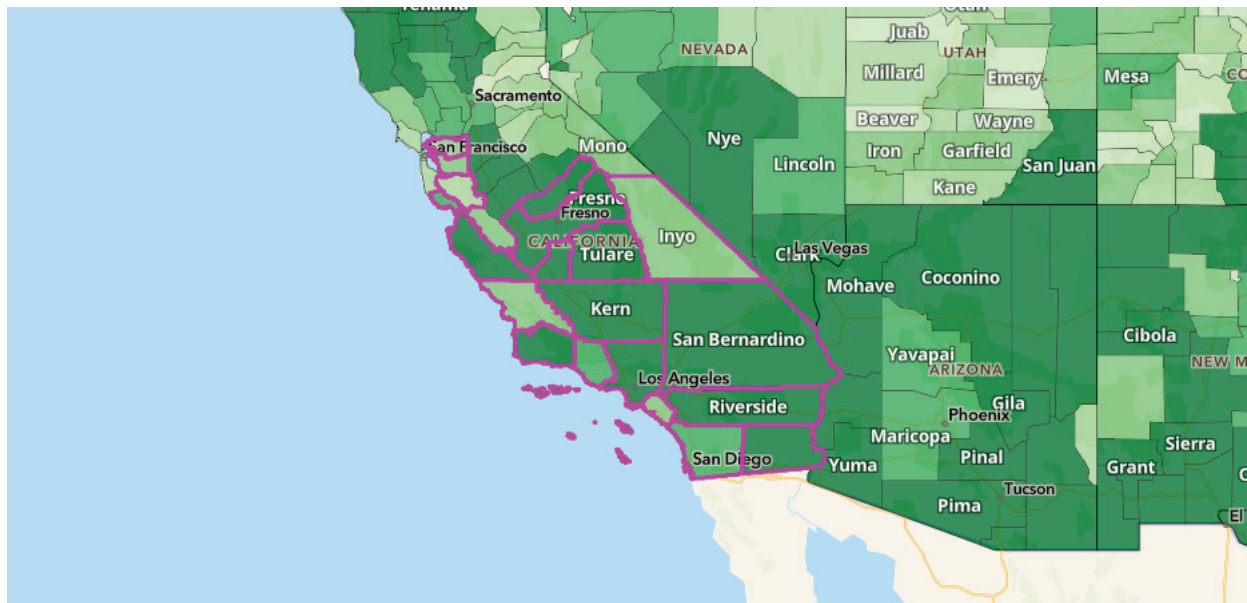
Rank	Community	State	EAL Value	Score
1	San Diego County	CA	\$381,629,724	100.0
2	Riverside County	CA	\$319,123,716	100.0
3	San Bernardino County	CA	\$134,371,346	99.9
4	Los Angeles County	CA	\$108,835,472	99.9
5	Orange County	CA	\$49,545,003	99.8
6	Ventura County	CA	\$48,353,567	99.8
7	Kern County	CA	\$27,849,354	99.6
8	Santa Barbara County	CA	\$23,953,369	99.5
9	Madera County	CA	\$20,122,138	99.2
10	Fresno County	CA	\$11,338,096	98.1
11	Santa Cruz County	CA	\$10,020,499	97.9
12	San Luis Obispo County	CA	\$9,706,413	97.8
13	Santa Clara County	CA	\$8,439,204	97.6
14	Monterey County	CA	\$7,834,255	97.4
15	Alameda County	CA	\$6,731,674	97.0
16	Tulare County	CA	\$6,151,930	96.9
17	Contra Costa County	CA	\$5,828,404	96.7
18	Inyo County	CA	\$305,607	76.9
19	Kings County	CA	\$69,768	59.7
20	Imperial County	CA	\$48,763	53.9

Winter Weather

Rank	Community	State	EAL Value	Score
1	Los Angeles County	CA	\$46,516	49.6
2	Riverside County	CA	\$20,604	31.0
3	San Diego County	CA	\$15,183	25.1
4	Madera County	CA	\$14,311	23.6
5	San Bernardino County	CA	\$9,416	18.1
6	Inyo County	CA	\$9,022	17.5
7	Kern County	CA	\$6,586	14.2
8	Tulare County	CA	\$4,184	10.5
9	Fresno County	CA	\$797	5.3
10	Monterey County	CA	\$144	4.8
11	Ventura County	CA	\$124	4.8
12	Santa Barbara County	CA	\$58	4.7
13	Orange County	CA	\$52	4.7
14	San Luis Obispo County	CA	\$1	4.5
15	Contra Costa County	CA	\$0	4.5
16	Santa Clara County	CA	\$0	4.4
17	Alameda County	CA	\$0	4.3
18	Imperial County	CA	\$0	4.3
	Kings County	CA	\$0	0.0
	Santa Cruz County	CA	\$0	0.0

Social Vulnerability

Social Vulnerability measures the susceptibility of social groups to the adverse impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood.



Social Vulnerability Legend

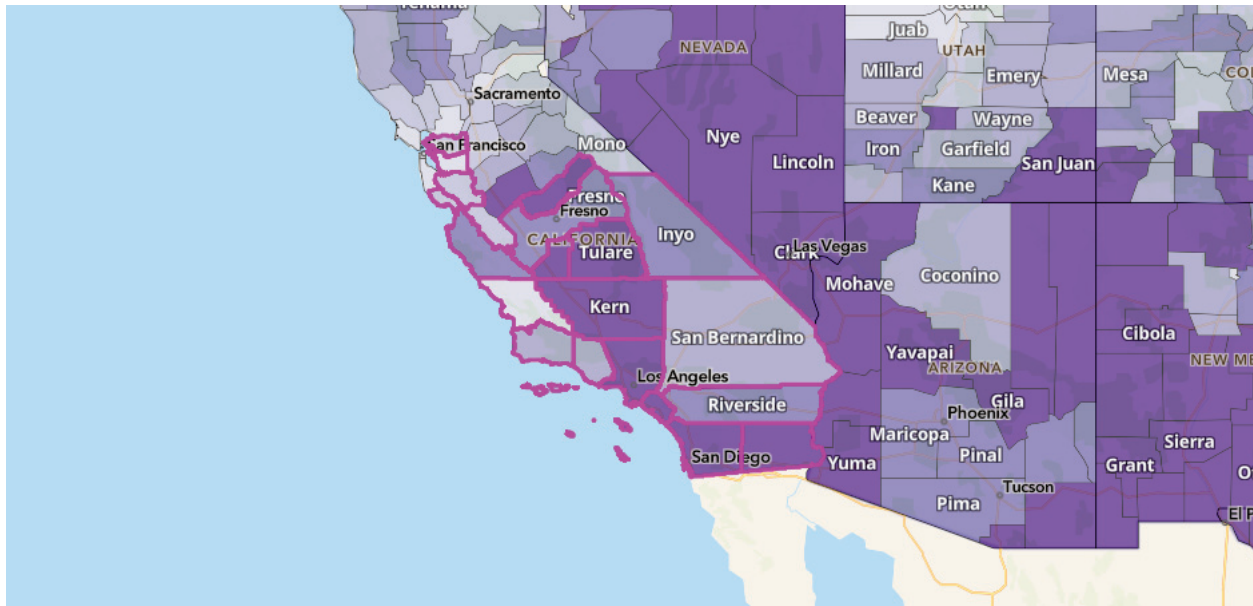
- Very High
- Relatively High
- Relatively Moderate
- Relatively Low
- Very Low
- Data Unavailable

Rank	Community	State	Rating	Score
1	Imperial County	CA	Very High	99.5
2	Kern County	CA	Very High	96.9
3	Fresno County	CA	Very High	96.1
4	Kings County	CA	Very High	94.6
5	Madera County	CA	Very High	93.5
6	Tulare County	CA	Very High	93.4
7	San Bernardino County	CA	Very High	90.6
8	Los Angeles County	CA	Very High	85.8
9	Monterey County	CA	Very High	84.5
10	Santa Barbara County	CA	Very High	83.6
11	Riverside County	CA	Very High	83.0
12	San Diego County	CA	Relatively High	69.9
13	Santa Cruz County	CA	Relatively High	61.4
14	Ventura County	CA	Relatively High	60.7
15	Orange County	CA	Relatively Moderate	56.2

Rank	Community	State	Rating	Score
16	Inyo County	CA	Relatively Moderate	52.9
17	Alameda County	CA	Relatively Moderate	51.5
18	Contra Costa County	CA	Relatively Moderate	47.4
19	San Luis Obispo County	CA	Relatively Moderate	44.7
20	Santa Clara County	CA	Relatively Low	37.1

Community Resilience

Community Resilience measures a County's ability to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions.



Community Resilience Legend

- Very High
- Relatively High
- Relatively Moderate
- Relatively Low
- Very Low
- Data Unavailable

Rank	Community	State	Rating	Score
1	San Luis Obispo County	CA	Very High	93.2
2	Alameda County	CA	Very High	83.5
3	Contra Costa County	CA	Relatively High	75.0
4	Santa Cruz County	CA	Relatively High	72.1
5	Santa Clara County	CA	Relatively High	68.9
6	Santa Barbara County	CA	Relatively Moderate	47.9
7	Ventura County	CA	Relatively Moderate	47.0
8	San Bernardino County	CA	Relatively Moderate	42.1
9	Inyo County	CA	Relatively Low	38.8
10	Monterey County	CA	Relatively Low	28.9
11	Riverside County	CA	Relatively Low	27.4
12	Fresno County	CA	Relatively Low	26.6
13	Los Angeles County	CA	Very Low	19.7
14	San Diego County	CA	Very Low	17.0
15	Kings County	CA	Very Low	16.8

Rank	Community	State	Rating	Score
16	Orange County	CA	Very Low	15.4
17	Madera County	CA	Very Low	14.7
18	Tulare County	CA	Very Low	12.8
19	Kern County	CA	Very Low	12.3
20	Imperial County	CA	Very Low	3.2

About the National Risk Index

The National Risk Index is a dataset and online tool to help illustrate the United States communities most at risk for 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hail, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather.

The National Risk Index leverages available source data for Expected Annual Loss due to these 18 hazard types, Social Vulnerability, and Community Resilience to develop a baseline relative risk measurement for each United States county and Census tract. These measurements are calculated using average past conditions, but they cannot be used to predict future outcomes for a community. The National Risk Index is intended to fill gaps in available data and analyses to better inform federal, state, local, tribal, and territorial decision makers as they develop risk reduction strategies.

Explore the National Risk Index Map at hazards.fema.gov/nri/map.

Visit the National Risk Index website at hazards.fema.gov/nri/learn-more to access supporting documentation and links.

Calculating the Risk Index

Risk Index scores are calculated using an equation that combines scores for Expected Annual Loss due to natural hazards, Social Vulnerability and Community Resilience:

$$\text{Risk Index} = \text{Expected Annual Loss} \times \text{Social Vulnerability} \div \text{Community Resilience}$$

Risk Index scores are presented as a composite score for all 18 hazard types, as well as individual scores for each hazard type.

For more information, visit hazards.fema.gov/nri/determining-risk.

Calculating Expected Annual Loss

Expected Annual Loss scores are calculated using an equation that combines values for exposure, annualized frequency, and historic loss ratios for 18 hazard types:

$$\text{Expected Annual Loss} = \text{Exposure} \times \text{Annualized Frequency} \times \text{Historic Loss Ratio}$$

Expected Annual Loss scores are presented as a composite score for all 18 hazard types, as well as individual scores for each hazard type.

For more information, visit hazards.fema.gov/nri/expected-annual-loss.

Calculating Social Vulnerability

Social Vulnerability is measured using the Social Vulnerability Index (SVI) published by the Centers for Disease Control and Prevention (CDC).

For more information, visit hazards.fema.gov/nri/social-vulnerability.

Calculating Community Resilience

Community Resilience is measured at the County level using the Baseline Resilience Indicators for Communities (HVRI BRIC) published by the University of South Carolina's Hazards and Vulnerability Research Institute (HVRI).

For more information, visit hazards.fema.gov/nri/community-resilience.

How to Take Action

There are many ways to reduce natural hazard risk through mitigation. Communities with high National Risk Index scores can take action to reduce risk by decreasing Expected Annual Loss due to natural hazards, decreasing Social Vulnerability, and increasing Community Resilience.

For information about how to take action and reduce your risk, visit hazards.fema.gov/nri/take-action.

Disclaimer

The National Risk Index (the Risk Index or the Index) and its associated data are meant for planning purposes only. This tool was created for broad nationwide comparisons and is not a substitute for localized risk assessment analysis. Nationwide datasets used as inputs for the National Risk Index are, in many cases, not as accurate as available local data. Users with access to local data for each National Risk Index risk factor should consider substituting the Risk Index data with local data to recalculate a more accurate risk index. If you decide to download the National Risk Index data and substitute it with local data, you assume responsibility for the accuracy of the data and any resulting data index. Please visit the [Contact Us](#) page if you would like to discuss this process further.

The methodology used by the National Risk Index has been reviewed by subject matter experts in the fields of natural hazard risk research, risk analysis, mitigation planning, and emergency management. The processing methods used to create the National Risk Index have produced results similar to those from other natural hazard risk analyses conducted on a smaller scale. The breadth and combination of geographic information systems (GIS) and data processing techniques leveraged by the National Risk Index enable it to incorporate multiple hazard types and risk factors, manage its nationwide scope, and capture what might have been missed using other methods.

The National Risk Index does not consider the intricate economic and physical interdependencies that exist across geographic regions. Keep in mind that hazard impacts in surrounding counties or Census tracts can cause indirect losses in your community regardless of your community's risk profile.

Nationwide data available for some risk factors are rudimentary at this time. The National Risk Index will be continuously updated as new data become available and improved methodologies are identified.

The National Risk Index Contact Us page is available at hazards.fema.gov/nri/contact-us.