

SFG-NW-6

**State Farm General Insurance Company
California Renters and Condominium Unitowners
Catastrophe Adjustment Excluding Fire Following Earthquake Provision**

In accordance with CCR §2644.5, we have developed a catastrophe adjustment factor based on at least 20 years of catastrophe data as described in this exhibit. Losses are coded as "catastrophe" if they result from a single event that is expected to produce at least 500 claims and \$500,000 in anticipated indemnity payments within the state of California for all Fire lines or if the claim is a wildfire designated claim. The inclusion of all wildfire designated claims allows a more holistic view of the wildfire risk and provides additional stability to our non-catasrophe trends and development.

For ratemaking purposes, all catastrophe (CAT) losses are removed from our loss data. CAT losses are analyzed separately and a CAT provision is developed according to the following procedure and used in the ratemaking formula.

I. Amount of Insurance Years Exposure Base

The Amount of Insurance Years statistic (AIY) measures \$1,000's of building insurance in force for one year. For example, a \$100,000 dwelling insured on January 1st and in force continuously for that year equals 100 Amount of Insurance Years. Amount of Insurance Years reflects changing values and represents an accurate measure of our exposure to catastrophic loss.

II. Catastrophe Provision per AIY (Excluding Fire Following Earthquake)

Because catastrophes can be infrequent events, many years of history are needed to determine a provision. Contract changes and changes in the number of policies written in catastrophe prone areas, however, make it prudent to give greater weight to more recent years. Please see Exhibit 9 - Pages 2-3 for the development of the CAT/AIY by program.

	<u>Renters</u>	<u>Condominium Unitowners</u>
CAT Provision per AIY excluding FFEQ	0.1696	0.2908

**State Farm General Insurance Company
California Renters
Catastrophe Adjustment Excluding Fire Following Earthquake Provision**

(1) Calendar Year	(2) AIY	(3) CAT Loss & DCCE	(4) CAT/AIY (3) / (2)	(5) Weight	(6) NCAT Loss & DCCE
1990	4,849,252	525,593	0.108	1.2%	10,482,886
1991	5,391,844	3,433,851	0.637	1.2%	17,582,061
1992	5,998,469	1,177,434	0.196	1.2%	21,163,099
1993	6,443,729	886,335	0.138	1.2%	25,026,146
1994	6,615,646	470,459	0.071	1.2%	24,824,761
1995	6,220,922	562,036	0.090	1.2%	17,010,738
1996	5,957,535	140,823	0.024	1.2%	15,497,781
1997	5,996,563	101,946	0.017	1.2%	13,236,615
1998	6,002,587	260,492	0.043	1.2%	12,579,289
1999	6,195,563	27,989	0.005	1.2%	13,921,038
2000	6,590,879	37,078	0.006	1.9%	15,209,925
2001	7,140,495	42,253	0.006	2.0%	20,832,738
2002	7,661,282	279,602	0.036	2.1%	20,600,203
2003	7,648,088	4,940,397	0.646	2.2%	22,620,612
2004	7,553,412	-2,186,328	-0.289	2.3%	17,238,126
2005	7,667,837	-249,195	-0.032	2.5%	12,855,904
2006	8,064,808	97,211	0.012	2.6%	15,246,127
2007	8,637,203	2,563,642	0.297	2.7%	20,744,142
2008	9,693,552	2,228,678	0.230	2.9%	21,228,258
2009	10,579,764	-1,202,039	-0.114	3.0%	25,117,968
2010	11,215,661	1,100,355	0.098	3.2%	27,473,163
2011	11,999,131	-667,065	-0.056	3.3%	34,912,726
2012	13,272,090	397,498	0.030	3.5%	39,157,872
2013	14,477,201	163,328	0.011	3.7%	38,178,545
2014	15,541,552	1,382,383	0.089	3.9%	39,390,204
2015	15,894,591	1,636,542	0.103	4.1%	39,812,493
2016	16,075,979	720,548	0.045	4.3%	51,737,254
2017	17,066,282	76,902,995	4.506	4.5%	50,355,481
2018	18,348,049	-29,874,047	-1.628	4.8%	50,617,663
2019	18,694,746	-9,805,338	-0.524	5.0%	51,475,021
2020	18,820,730	323,233	0.017	5.3%	42,409,540
2021	18,971,547	-4,496,143	-0.237	5.6%	44,665,037
2022	19,712,276	211,280	0.011	5.9%	58,949,403
2023	20,264,797	10,679,176	0.527	6.2%	71,890,943

Catastrophe Ratio (Column (4) weighted by Column (5)): 0.1696

(3) Non-Hurricane Catastrophe Loss and DCCE net of subrogation. Adjustments have been made as needed to incorporate any significant changes in our contract and in the distribution of our book of business.

NOTE: Calendar year 2020 and 2021 CAT loss & DCCE reflects subrogation recoveries attributed to wildfire events that occurred in calendar years 2017 and 2018.

(5) The latest year is given a weight of 6.2%, with each prior year receiving 5% less weight back to 2000. For the years 1990-99, the remainder of the distribution was spread evenly across the 10 year period.

(6) Non-Catastrophe Loss and DCCE net of subrogation. Adjustments have been made as needed to incorporate any significant changes in our contract and in the distribution of our book of business.

The total outstanding California catastrophe reserves as of 12/31/2023 is \$10,326,354 for the Renters program.

**State Farm General Insurance Company
California Condominium Unitowners
Catastrophe Adjustment Excluding Fire Following Earthquake Provision**

(1) Calendar Year	(2) AIY	(3) CAT Loss & DCCE	(4) CAT/AIY (3) / (2)	(5) Weight	(6) NCAT Loss & DCCE
1990	4,399,627	447,040	0.102	1.2%	14,373,747
1991	4,875,958	1,799,217	0.369	1.2%	15,685,357
1992	5,345,066	979,723	0.183	1.2%	11,972,628
1993	5,734,597	658,929	0.115	1.2%	13,506,704
1994	6,077,316	196,076	0.032	1.2%	14,751,826
1995	6,180,373	2,132,535	0.345	1.2%	13,143,066
1996	6,122,745	96,594	0.016	1.2%	15,267,689
1997	6,148,419	374,052	0.061	1.2%	16,047,321
1998	6,230,552	654,496	0.105	1.2%	18,864,636
1999	6,507,198	86,376	0.013	1.2%	13,261,644
2000	6,781,113	200,418	0.030	1.9%	17,529,849
2001	7,138,689	407,578	0.057	2.0%	34,203,838
2002	7,347,131	514,821	0.070	2.1%	30,710,097
2003	6,956,450	2,153,021	0.309	2.2%	22,407,556
2004	6,892,685	231,319	0.034	2.3%	25,624,759
2005	7,119,935	1,848,037	0.260	2.5%	20,260,808
2006	7,479,610	445,318	0.060	2.6%	23,114,088
2007	7,817,628	1,354,397	0.173	2.7%	30,370,353
2008	8,207,784	1,921,335	0.234	2.9%	35,260,000
2009	8,563,714	405,297	0.047	3.0%	36,406,003
2010	8,600,794	3,223,106	0.375	3.2%	33,628,808
2011	8,441,299	848,417	0.101	3.3%	34,370,229
2012	8,480,422	605,830	0.071	3.5%	41,519,199
2013	8,586,370	150,555	0.018	3.7%	42,419,925
2014	8,712,311	1,868,560	0.214	3.9%	44,844,080
2015	8,731,922	-225,474	-0.026	4.1%	43,392,757
2016	8,706,901	752,421	0.086	4.3%	55,352,087
2017	8,783,796	26,960,838	3.069	4.5%	55,087,908
2018	8,978,275	-6,073,031	-0.676	4.8%	55,041,984
2019	9,150,055	-206,280	-0.023	5.0%	63,379,450
2020	9,331,917	-375,718	-0.040	5.3%	58,213,480
2021	9,645,655	-423,374	-0.044	5.6%	68,795,043
2022	10,340,456	2,910,035	0.281	5.9%	90,518,436
2023	11,136,993	17,122,775	1.537	6.2%	101,117,953

Catastrophe Ratio (Column (4) weighted by Column (5)): 0.2908

(3) Non-Hurricane Catastrophe Loss and DCCE net of subrogation. Adjustments have been made as needed to incorporate any significant changes in our contract and in the distribution of our book of business.

NOTE: Calendar year 2020 and 2021 CAT loss & DCCE reflects subrogation recoveries attributed to wildfire events that occurred in calendar years 2017 and 2018.

(5) The latest year is given a weight of 6.2%, with each prior year receiving 5% less weight back to 2000. For the years 1990-99, the remainder of the distribution was spread evenly across the 10 year period.

(6) Non-Catastrophe Loss and DCCE net of subrogation. Adjustments have been made as needed to incorporate any significant changes in our contract and in the distribution of our book of business.

The total outstanding California catastrophe reserves as of 12/31/2023 is \$9,053,586 for the Condominium Unitowners program.

**State Farm General Insurance Company
California Renters and Condominium Unitowners
Catastrophe Provision
Fire Following Earthquake Provision**

State Farm's Homeowners Catastrophe Provision calculation described in the preceding pages is based on a statistical analysis of historical catastrophe losses. There is exposure to loss due to fire following an earthquake that is not reflected in this historical experience. Any catastrophe provision based on historical data should be modified to more appropriately recognize the Homeowners exposure due to fire following an earthquake.

Provision for Fire Following Earthquake

Fire conflagrations following earthquakes, as evidenced by the 1923 Great Kanto Earthquake and the 1906 San Francisco Earthquake, can cause enormous property damage and loss of life. The major 1989 Bay area earthquake and the 1994 Northridge earthquake were not of the magnitude expected to produce a catastrophic conflagration. Fortunately, neither occurred during extreme fire conditions. In California, not since the San Francisco earthquake of 1906 has there been a great earthquake of the magnitude expected to produce a catastrophic conflagration. It is, therefore, inappropriate to rely solely on historical insurance data to assess the exposure to fire following earthquake. It is necessary to look to definitive scientific studies, scientific modeling and judgment to supplement historical data.

I. Fire Following Earthquake: Conflagration Potential in the Greater Los Angeles, San Francisco, Seattle and Memphis Areas

This study, produced by Drs. Charles Scawthorne and Mahmoud Khater for the Earthquake Project (subsequently known as the Natural Disaster Coalition), utilizes the expertise of EQECAT, Inc. to produce estimates of fire following earthquakes of various magnitudes in the San Francisco and Los Angeles areas of California.

From the Executive Summary of that report:

Fire following earthquake is a very serious threat to insurance companies. The fire losses shown in this study are substantially higher than the insured shake damage losses projected in a 1990 California Insurance Department study (\$6 billion for insured shake damage in the San Francisco Bay area, \$8.5 billion for insured shake damage in the Los Angeles region). The reason for this is that nearly all property is insured for fire, but fewer than 20% of homes and business properties in the two affected areas are insured for shake damage, even though California law requires insurers to offer shake damage to property owners.

The report summarizes property loss in a Bay Area quake to be 1.1% of property value, .2 to .6% for other California faults. The summary includes all property loss, personal and commercial as well as insured and uninsured. Personal and commercial splits are not available in the report. The report, therefore, is only used to illustrate the magnitude of the exposure.

II. Computer Modeling for Fire Following Earthquake

State Farm is utilizing the earthquake simulation models from CoreLogic RQE v23.0, RMS RiskLink 23.0 and AIR Touchstone 10.0 to provide annual fire following earthquake property loss estimates. The RQE model is used by the CEA for earthquake loss estimates in pricing. The RQE model as well as RMS and AIR incorporate expertise in the fields of engineering, seismology, geology, statistics and computer science to produce a library of earthquake events, each with associated probabilities of occurrence. This library is intended to represent tens of thousands of years of possible earthquakes. For AIR, the 50K year event set was used in the analysis.

For each of these stochastically simulated events, the models are capable of overlaying the physical characteristics of the event against the portfolio of the insured exposures. Such exposures are described by geographic locations, values, policy forms (types of coverage), limits, deductibles and construction characteristics, and are related to the models' computed seismic activity, associated damage, and accompanying financial losses. To compute the expected annual loss, the losses from each simulated event are then weighted by the probability of that event's occurrence.

**State Farm General Insurance Company
California Renters and Condominium Unitowners
Catastrophe Provision
Fire Following Earthquake Provision**

Given the large volume of simulated events and the fact that theoretically all relevant available information has been taken into account in the model simulations, the model results are considered fully credible.

Shaking intensity is the basis of estimating fire following earthquake losses. In addition to shaking intensity, all three fire following earthquake models estimate severity and frequency of loss based on the underlying physical parameters that impact the loss. Additional loss factors include:

1. Ignition Frequency: Conflagration risk increases with the number of ignitions.
2. Fuel Source: Wooden structures greatly increase the fire risk, for a given ignition frequency (1906 and 1923 events had predominantly wooden construction).
3. Burn Rate: The rate at which a fire spreads is dependent on the fuel source and building density.
4. Fire Fighting Capacity: The model estimates the potential fire fighting capacity, including number of fire stations, fire engines and manpower.
5. Water supply vulnerability: Even with adequate fire fighting capacity, failed water supply systems will imperil fire department functionality. The network based model includes water supply vulnerability (pipeline breaks), including storage reservoirs, and alternate (redundant) waterline routes.
6. Wind speed: Strong winds can dramatically increase fire severity, as evidenced by the 1923 Kanto and the 1991 Oakland Hills fire. Therefore, the variance in local wind speeds is essential in estimating the frequency and event severity.
7. Seasonality: Wet or dry weather conditions can retard or contribute to the fire loss.

III. Fire Following Earthquake Provision

State Farm General Insurance Company's fire exposure as of 9/30/2023 is used for the simulations to determine the annual fire following earthquake loss per AIY for each model. The statewide annual fire following earthquake loss per AIY provision is the simple average of the results from the three models. This loss per AIY is adjusted to reflect defense and cost containment expense (DCCE) since this cost is not included in the models' results. The DCCE provision of 4.4% is selected, resulting in the final Fire Following Earthquake provisions shown below.

	Renters	Condominium Unitowners
RQE Model Loss per AIY	0.0107	0.0327
RMS Model Loss per AIY	0.0361	0.0819
AIR Model Loss per AIY	0.0176	0.0418
Average	0.0215	0.0522
DCCE factor	1.0440	1.0440
FFEQ Provision per AIY	0.0224	0.0544

**State Farm General Insurance Company
California Renters and Condominium Unitowners
Catastrophe Adjustment**

	Fiscal Calendar/Accident Year Ending 20234	
	Renters	Condominium Unitowners
(1) NC Loss + DCCE developed and trended	58,118,006	103,389,372
(2) CAT Provision per AIY excluding FFEQ	0.1696	0.2908
(3) FFEQ Provision per AIY	0.0224	0.0544
(4) CAT Provision per AIY including FFEQ	0.1920	0.3452
(5) Projected AIY	20,881,229	11,904,799
(6) CAT Provision Dollars	4,009,624	4,109,649
(7) CAT Provision to NC Loss + DCCE	0.069	0.040
(8) Catastrophe Adjustment Factor incl FFEQ	1.069	1.040

- (1) (Historic Losses x To-Ult Factor (Exhibit 7) x Loss & DCCE Trend Factor (Exhibit 8))
+ (Historic DCCE x To-Ult Factor (Exhibit 7) x Loss & DCCE Trend Factor (Exhibit 8))
(2) Exhibit 9 - Page 1
(3) Exhibit 9 - Page 5
(4) = (2) + (3)
(5) See calculation below
(6) = (4) x (5)
(7) = (6) / (1)
(8) = (7) + 1

	Fiscal Calendar/Accident Year Ending 20234	
	Renters	Condominium Unitowners
AIY	20,264,797	11,136,993
Projected Annual AIY Trend	1.2%	2.7%
Trend Date	7/1/2023	7/1/2023
Projection Date	1/1/2026	1/1/2026
Years Trended	2.507	2.507
Factor	1.030	1.069
Projected AIY	20,881,229	11,904,799

**State Farm General Insurance Company
California Renters and Condominium Unitowners
Catastrophe Subrogation Recoveries**

Calendar Year	Recoveries*	
	Renters	Condominium Unitowners
2004	-	35,480
2005	-	35,237
2006	-	17,777
2007	-	7,594
2008	685	1,311
2009	756,890	521,057
2010	-	15,609
2011	67,756	41,470
2012	-	2,500
2013	24,680	35,040
2014	-	-
2015	1,903	-
2016	-	17,210
2017	109,430	45,610
2018	41,345	21,914
2019	-	-
2020	11,036,295	3,208,174
2021	3,806,597	2,171,552
2022	780,053	330,745
2023	368,854	239,739

* Subrogation data prior to 2004 is not readily available

**State Farm General Insurance Company
California Renters and Condominium Unitowners
Major Catastrophe Events**

Year	Event Name	Associated Peril(s)
1991	Oakland Hills Wildfire	Fire
2003	Simi/Cedar/Oak Wildfires	Fire
2017	Tubbs/Northern Wildfire	Fire
2018	Camp Wildfire	Fire
2018	Woolsey Wildfire	Fire
2020	August 2020 Wildfires	Fire