

# Catastrophic Risk Premium Subsidization Analysis for National Association of Realtors®

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## Executive Summary

### PURPOSE OF REPORT

The National Association of REALTORS® (NAR) is a trade association representing REALTORS® in the United States. It is the country’s largest trade association and one of its largest lobbying groups. Milliman, Inc. (Milliman) is among the world’s largest independent actuarial and consulting firms. NAR engaged Milliman to assist in the evaluation of whether NAR should support a federal all-natural-catastrophe-perils insurance mandate and to determine the magnitude of the cross-subsidization that would exist between states if a single premium were to be charged for natural perils catastrophe risk.

This section of the report contains a high-level summary of our project scope and findings. The remainder of this report provides a more in-depth description of the data, methods and assumptions underlying these results, extended comments on our findings, and exhibits that document the analysis.

### SCOPE OF ANALYSIS

The scope of this analysis is to evaluate the degree of cross-subsidization that would be created if there were a mandate to offer catastrophe coverage where everyone paid the same rate. At NAR’s request, catastrophe exposure is defined as hurricane wind, earthquake (shake only), inland flood, storm surge, and severe convective storm (tornado, hail, and catastrophic straight-line wind); it excludes all other perils. The analysis was limited to single-family owner occupied homes in the United States, excluding Hawaii, Alaska, the District of Columbia, and territories of the United States. Any reference to “countrywide” in this report reflects this list of included states. This white paper compares the estimated average cost countrywide with the estimated average cost at the state level and illustrates our conclusions.

The analysis in this report is shown for all catastrophe (CAT) perils combined, for perils not typically covered in a homeowners policy (i.e. earthquake, inland flood, and storm surge), for total flood (inland flood and storm surge), and for each peril individually. Average Annual Loss (AAL) is calculated using catastrophe

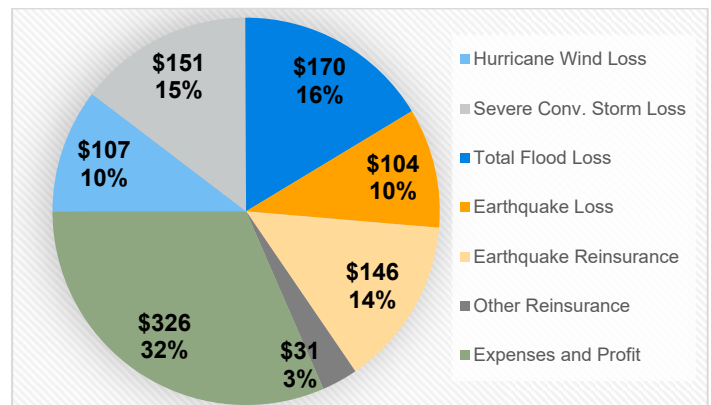
models for a countrywide set of realistic exposures. Estimated average premiums by state and countrywide are developed using AAL and expense assumptions. Premium subsidies are calculating assuming one rate for the amount of coverage purchased for the entire country, and comparing to the estimated average premium for the state. Multiple scenarios of reinsurance expenses are used to show the sensitivity of resulting premiums and cross-subsidization to reinsurance assumptions. All findings discussed in this section use the medium reinsurance expense scenario unless otherwise stated.

### KEY FINDINGS

The following are key findings from our review:

- The estimated average countrywide premium is \$1,036 for all CAT perils combined. Figure 1 below shows the countrywide premium breakdown of loss (including loss adjustment expense) split by peril, reinsurance split by earthquake and other perils, and expenses and profit for all CAT perils, in dollars and as a percent of total.

FIGURE 1: COUNTRYWIDE PREMIUM BREAKDOWN



- The estimated average countrywide premiums for items not typically covered by a homeowners policy are \$276 for flood and \$365 for earthquake. Therefore, a mandate to include these coverages would increase premiums by an estimated

\$641, or a 55% increase to the NAIC average HO-3 premium of \$1,173. The estimated average statewide rate increase would range from 25% in Oklahoma to 99% in Oregon; the variation of individual policies would be much greater.

- 41 states would subsidize the seven remaining states for perils not covered by homeowners insurance (Earthquake and Flood). The states receiving subsidies in order of largest to smallest would be California, Louisiana, Washington, Utah, South Carolina, Florida, and Oregon.

**TABLE 1: IMPACT OF INCLUSION AND SUBSIDIZATION OF NON-INSURED CAT PERILS**

State	Current Avg HO3 Premium	Unsubsidized		Subsidized		Subsidy received (paid)
		Avg Premium: Earthquake + Flood	Avg Rate Increase (%)	Avg Premium: Earthquake + Flood	Avg Rate Increase (%)	
AL	\$1,358	\$184	14%	\$488	36%	(\$304)
AR	1,312	332	25	462	35	(131)
AZ	810	197	24	592	73	(396)
CA	986	3,410	346	888	90	2,522
CO	1,383	188	14	705	51	(517)
CT	1,411	357	25	862	61	(505)
DE	780	264	34	694	89	(431)
FL	1,993	821	41	602	30	219
GA	1,152	180	16	588	51	(408)
IA	919	126	14	492	54	(366)
ID	692	264	38	559	81	(295)
IL	1,033	202	20	709	69	(508)
IN	983	150	15	515	52	(365)
KS	1,531	132	9	512	33	(380)
KY	1,062	264	25	490	46	(226)
LA	1,945	955	49	494	25	461
MA	1,379	280	20	913	66	(633)
MD	982	137	14	734	75	(597)
ME	843	573	68	631	75	(57)
MI	908	129	14	577	64	(449)
MN	1,323	126	10	642	49	(516)
MO	1,253	251	20	558	44	(307)
MS	1,508	253	17	444	29	(191)
MT	1,081	396	37	562	52	(166)
NC	1,075	241	22	548	51	(307)
ND	1,200	156	13	527	44	(371)
NE	1,360	91	7	475	35	(383)
NH	941	467	50	711	76	(244)
NJ	1,149	417	36	901	78	(483)
NM	982	234	24	560	57	(325)
NV	737	562	76	665	90	(103)
NY	1,287	354	28	794	62	(440)
OH	819	125	15	540	66	(415)
OK	1,879	151	8	467	25	(316)
OR	643	779	121	638	99	141
PA	913	256	28	630	69	(374)
RI	1,446	150	10	762	53	(612)
SC	1,284	819	64	554	43	265
SD	1,096	164	15	499	46	(335)
TN	1,149	355	31	515	45	(160)
TX	1,991	493	25	525	26	(32)
UT	673	943	140	623	93	320
VA	946	224	24	690	73	(466)
VT	873	618	71	699	80	(81)
WA	811	1,079	133	710	88	369
WI	750	114	15	593	79	(478)
WV	907	413	46	493	54	(79)
WY	1,088	409	38	563	52	(154)
Total	\$1,173	\$641	55%	\$641	55%	\$0

- As shown in Table 2 below, 38 states would subsidize the 10 remaining states if all CAT perils considered were included in a mandate to offer coverage where everyone paid the same rate.

**TABLE 2: ALL CAT PERILS PREMIUM SUBSIDIES BY STATE**

State	All Catastrophe Perils		
	Avg Premium	Avg Subsidized Premium	Avg Subsidy Received (Paid)
AL	\$785	\$788	(3)
AR	867	747	121
AZ	296	957	(661)
CA	3,418	1,435	1,983
CO	904	1,139	(235)
CT	672	1,393	(720)
DE	449	1,122	(673)
FL	2,078	973	1,105
GA	494	950	(456)
IA	583	795	(212)
ID	276	903	(627)
IL	525	1,146	(621)
IN	470	832	(362)
KS	1,329	827	502
KY	620	792	(172)
LA	2,201	798	1,403
MA	667	1,475	(808)
MD	309	1,186	(877)
ME	720	1,019	(299)
MI	235	933	(698)
MN	672	1,037	(365)
MO	821	901	(80)
MS	935	717	217
MT	622	908	(286)
NC	656	885	(229)
ND	558	852	(294)
NE	893	767	126
NH	587	1,149	(562)
NJ	654	1,455	(801)
NM	390	904	(514)
NV	576	1,075	(500)
NY	603	1,283	(680)
OH	309	873	(565)
OK	1,260	755	505
OR	786	1,031	(245)
PA	365	1,018	(654)
RI	753	1,231	(479)
SC	1,437	895	542
SD	634	806	(172)
TN	762	832	(70)
TX	1,253	849	404
UT	978	1,007	(28)
VA	448	1,115	(666)
VT	672	1,130	(458)
WA	1,083	1,148	(65)
WI	341	957	(616)
WV	542	796	(255)
WY	742	910	(168)
Total	\$1,036	\$1,036	\$0

- Table 3 lists the states receiving the five highest premium subsidies as calculated in Exhibit 1, Page 1. Kansas, Texas,

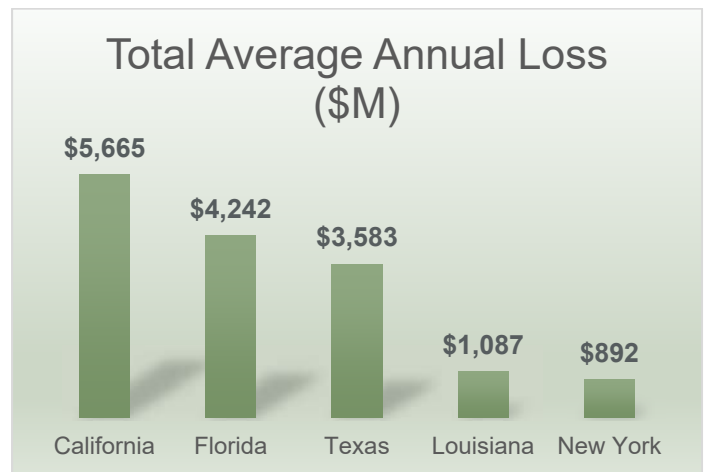
Mississippi, Nebraska, and Arkansas are the remaining states that would receive a premium subsidy.

**TABLE 3: HIGHEST ALL CAT PERILS PREMIUM SUBSIDIES BY STATE**

STATE RECEIVING SUBSIDY	AVERAGE PREMIUM SUBSIDY RECEIVED
CALIFORNIA	\$1,983
LOUISIANA	\$1,403
FLORIDA	\$1,105
SOUTH CAROLINA	\$542
OKLAHOMA	\$505

- California has the highest all CAT peril estimated average premium, driven by earthquake and the associated reinsurance costs. Louisiana, Florida, and South Carolina make up the next three highest, driven by hurricane and flood. Oklahoma is the fifth highest, driven by severe convective storm.
- Applying the AAL to census estimates of owner occupied one unit residences, Figure 2 shows the five states with the largest estimated total average annual losses in millions. The total average annual losses for these five states (~\$15.5B) are larger than the remaining 43 states combined (~\$14.4B). The total average annual losses are estimated at just under \$30 billion. The total average annual losses shown in Figure 2 are calculated in Exhibit 4, Page 2.

**FIGURE 2: HIGHEST TOTAL AVERAGE ANNUAL LOSS**



- Inland flood has the lowest variance per peril, with many states having significant exposure to this peril. 45 of the 48 states in the analysis have an inland flood premium of at least \$100.
- Reinsurance expenses have a small impact on estimated average premiums and subsidies for perils outside of earthquake. Given the large reinsurance costs for earthquake,

premiums and subsidies are sensitive to these assumptions. However, even in the low reinsurance expense scenario, California has the second highest premium subsidy.

## Description of Analysis and Assumptions

### AAL AND ESTIMATED AVERAGE PREMIUM

AALs were calculated for each sample risk in our market basket by running the market baskets through catastrophe models. Market baskets were used to represent a countrywide set of exposures. A market basket is a portfolio of hypothetical risks with a realistic distribution of the characteristics used for insurance pricing and underwriting. The locations are the actual locations of real risks in the marketplace, as well as certain characteristics of those risks. Other characteristics were not specified but set to “unknown” in the catastrophe models. The catastrophe models typically treat “unknown” characteristics as a weighted average of possible values for those characteristics.

We utilized catastrophe model output obtained from the RMS version 17.0 earthquake (shake only), hurricane, and severe convective storm models and KatRisk storm surge and inland flood models. RMS event sets used were stochastic event rates (time dependent) for earthquake, long-term rates for hurricane, and high and low frequency for severe convective storm. The RMS hurricane model was used to calculate RMS storm surge, calculated as hurricane with storm surge less hurricane wind. All RMS AALs were calculated with demand surge. Storm Surge was the only peril where results from both RMS and KatRisk were obtained, and we selected an average of the results from each model for this analysis.

Estimated average premiums were developed using expense and reinsurance assumptions. Please see the discussion of Exhibits 5 and 6 below for more details.

### MARKET BASKETS

We developed our market baskets based on a random sample of single family residential data from Black Knight, Inc. (Black Knight)<sup>1</sup>. The sample percent varies by state, but represents approximately 10% of all single family residences in the study area, based on census estimates of owner occupied one unit residences. Black Knight’s location (latitude and longitude) was used for each location in our market basket. We reviewed data for general reasonability, but did not fully validate all fields.

We used Black Knight’s year built, living area, and number of stories where we found the data to be reasonable. Otherwise unknown values were used for these distributions. The year built was completely missing for the state of Vermont, so the same year

built distribution as New Hampshire was selected. For the state of Florida, we relied on data and distributions from our Milliman market basket developed with a variety of internal and external sources. The primary data source for the Florida market basket is Florida Department of Revenue property tax data.

The coverage A is the amount of insurance purchased for the replacement cost of the dwelling. To obtain the Coverage A for each location, we adjusted an estimate of the market value of the property obtained from Black Knight based on the state’s actual distribution of coverage A, as obtained from the NAIC report “Dwelling Fire, Homeowners Owner-Occupied, and Homeowners Tenant and Condominium/Cooperative Unit Owner’s Insurance Report: Data for 2015”. The final state level distributions match those of the NAIC report, with the assumption that limits above \$500,000 are uniformly distributed between \$500,000 and \$1,000,000. Thus, state level distributions closely match actual coverage A limits within the NAIC study. This assumes that a home with a higher market value than another home will also have a higher replacement value. While this assumption will not always be true, we believe it is more reasonable than assuming a random distribution of values across an entire state.

Limits for other structures (coverage B), contents (coverage C), and loss of use (coverage D) were selected as 10%, 50%, and 20% of building limits, respectively. These limits are common base coverage options for Homeowners policies. A single deductible of 1% of the building limit was also selected. These selections are not always typical for each peril, for example earthquake policies have much higher deductibles in California. The selections were made assuming consistent coverages across perils for a national catastrophe program.

## Discussion of Exhibits

### EXHIBIT 1 – PREMIUM SUBSIDY BY STATE AND PERIL

Exhibit 1 calculates the premium subsidy by state and peril. The premium subsidy for each state/peril combination is calculated as the difference between the subsidized premium from Exhibit 2 and the unsubsidized average premium from Exhibit 3.

A positive value indicates a state would receive a subsidy for that peril. Conversely, a negative value indicates the state would pay a subsidy for that peril. Pages 1 through 3 vary by the medium, high, and low reinsurance assumptions outlined in Exhibit 6.

The perils analyzed are shown separately and also grouped together for certain combinations (i.e. all CAT perils, flood perils and earthquake and flood). In addition, the statewide average homeowners premiums for HO3 are displayed.

<sup>1</sup> Black Knight is a technology, data, and analytics provider for the mortgage and finance industries.

## EXHIBIT 2 – COVERAGE A ADJUSTED SUBSIDIZED PREMIUM BY STATE AND PERIL

Exhibit 2 calculates the countrywide estimated rate per \$1,000 of coverage A by dividing the estimated average premium by the average countrywide coverage A divided by \$1,000, as displayed in the bottom row of the exhibit. The countrywide rate by peril is applied to the average coverage A for each state to determine each state's subsidized premium. We chose this formula so that the premium is based on a common rate for the amount of coverage purchased. For example, a policy with \$400,000 of coverage A would cost twice the premium of a policy with \$200,000 of coverage A. Similar to Exhibit 1, Pages 1 through 3 vary by the medium, high, and low reinsurance assumptions.

## EXHIBIT 3 – ESTIMATED AVERAGE PREMIUM BY STATE AND PERIL

Exhibit 3 combines the AALs from Exhibit 4 with the expenses from Exhibit 6, to determine the premium by state and peril. Pages 1 through 3 also vary by the medium, high, and low reinsurance assumptions. Similar to Exhibit 4, there are premiums for states prone to a specific peril, while states with minimum to no exposure to an individual peril have a very low or negligible premium.

## EXHIBIT 4 – AVERAGE LOSS AND TOTAL AVERAGE ANNUAL LOSS BY STATE AND PERIL

Exhibit 4 displays the modeled AAL by state and peril. As expected, there are larger AALs for states prone to specific perils, while states with minimal to no exposure to an individual peril are very low or negligible. Page 1 shows the AAL per one-unit owner occupied residence, and Page 2 uses census estimates of one-unit owner occupied residences to estimate total average annual losses by state and peril.

## EXHIBIT 5 – PREMIUM CALCULATION EXAMPLE

Exhibit 5 details how the premium is developed using the AAL, expense assumptions, and reinsurance assumptions. South Carolina is shown as an example for illustrative purposes.

## EXHIBIT 6 – EXPENSE, PROFIT AND REINSURANCE SUMMARY

We have used the three largest homeowners insurers by direct written premium in the United States, based upon the 2016 NAIC market share ([http://www.naic.org/prod\\_serv/MSR-PB-17.pdf](http://www.naic.org/prod_serv/MSR-PB-17.pdf)) to determine the expenses used in the development of premium by state. These companies are the Allstate Group, Liberty Mutual Group, and State Farm Group. All expenses except the reinsurance and profit provisions were obtained from the homeowners data for the relevant group's 2016 Insurance Expense Exhibit. (IEE). The expenses used from the IEE are:

- Commission and Brokerage – a percentage of premium paid to agents and brokers for the sale of policies

- Other Acquisition – expenses other than commissions and brokerage expenses paid to acquire business
- General – include the remaining expenses associated with the insurance operations and any other miscellaneous costs
- Taxes, Licenses and Fees – include all taxes and miscellaneous fees paid by the insurer excluding federal income taxes (i.e. state premium taxes and licensing fees)
- Other Expenses – includes other miscellaneous expenses of the insurer
- Loss Adjustment Expenses – include expenses to the insurer for the settlement of claims

We have opted to use a straight average of these expenses rather than a premium weighted average (which would give a much larger weight to State Farm). The profit provision is based upon recent State Farm filings for South Carolina and Louisiana, and generally is in line with industry profit provisions after consideration of catastrophic risk.

Reinsurance expenses have also been included since most private insurance companies purchase reinsurance. Reinsurance cost depends on many things, including the perils covered, the attachment point and limits, the distribution of risks, and other terms and conditions of the contracts. We have elected to use recent rate filings for the states of Louisiana, Texas, Florida and South Carolina to determine an estimate of the cost of reinsurance for hurricane wind, and assumed the same cost for inland flood and storm surge. Reinsurance expenses of zero were assumed for the severe convective storm peril, consistent with general industry practice for diversified insurers. For earthquake, we used California filings from the California Earthquake Authority and Geovera Insurance Company. For each of these reinsurance costs, we have assumed a low, medium and high scenario. Please refer to Exhibit 1, Page 2 for further detail of the determination of these scenarios. As stated in the executive summary, premiums are sensitive to the earthquake reinsurance assumptions, but not to the reinsurance expense for other perils.

## EXHIBITS 7 THROUGH 14 – PERIL MAPS

All by peril analysis maps display the medium reinsurance expense scenario.

## EXHIBIT 7 – ALL CAT PERILS MAPS

California, Louisiana and Florida have the largest all CAT peril premium followed by South Carolina, Kansas, Oklahoma, and Texas. When comparing the individual state's all CAT peril premium to a countrywide premium, the aforementioned states receive a large benefit, with the majority of the remaining states providing subsidies.



## EXHIBIT 8 – EARTHQUAKE AND TOTAL FLOOD PERIL MAPS

California has the largest earthquake and total flood premium followed by Washington, Louisiana, Utah, Florida, South Carolina and Oregon. When comparing the individual state's earthquake and total flood premium to a countrywide premium, the above list of largest earthquake and total flood premium states all receive a large benefit, while the remaining states all provide a subsidy.

## EXHIBIT 9 – TOTAL FLOOD PERIL MAPS

Louisiana and Florida have the largest total flood premium followed by Vermont, South Carolina, Texas and Maine. When comparing the individual state's total flood premium to a countrywide premium, as one would expect, the largest total flood premium states receive a large benefit, while states with lower total flood exposure provide the largest subsidies.

## EXHIBIT 10 – HURRICANE WIND PERIL MAPS

Florida and Louisiana have the largest hurricane wind premium followed by Rhode Island, South Carolina, Texas, Massachusetts, Mississippi, North Carolina, Connecticut and Alabama. The average premium of Florida and Louisiana is over three times the size of the average of the other large hurricane wind premium states. When comparing the individual state's hurricane wind premium to a countrywide premium, as one would expect, the largest hurricane wind premium states receive a large benefit, while states that do not have hurricane exposure provide the largest subsidy. The subsidy for Florida is approximately 86% of their hurricane wind premium.

## EXHIBIT 11 – SEVERE CONVECTIVE STORM PERIL MAPS

Kansas, Oklahoma, Nebraska and Colorado have the largest severe convective storm premiums followed by Missouri, Minnesota, Arkansas, South Dakota and Iowa. The average premiums for Kansas and Oklahoma are approximately twice as large as the average premium for the remaining large premium states. When comparing the individual state's severe convective storm premium to a countrywide premium, as one would expect, the largest severe convective storm states receive a large benefit, while states that have lower severe convective storm exposure provide the largest adverse subsidies. The subsidy for Kansas is approximately 85% of their expected severe convective storm premium.

## EXHIBIT 12 – INLAND FLOOD PERIL MAPS

Vermont, West Virginia and New Hampshire have the largest inland flood premium followed by Wyoming, California, Montana, New Jersey and Oregon. When comparing the individual state's inland flood premium to a countrywide premium, as one would expect, the largest inland flood premium states receive a large

benefit, while states with the lowest inland flood exposure have the largest adverse subsidies.

## EXHIBIT 13 – STORM SURGE PERIL MAPS

Louisiana and Florida have the largest storm surge premiums followed by South Carolina, Maine, and Texas. When comparing the individual state's storm surge premium to a countrywide premium, as one would expect, the largest storm surge premium states receive a large benefit, while states that minimal to no storm surge exposure provide the largest subsidies. The subsidy for Louisiana is approximately 90% of their storm surge premium.

## EXHIBIT 14 – EARTHQUAKE PERIL MAPS

California has the largest earthquake premium followed by Washington, Utah, Oregon, Nevada and South Carolina. California's premium is over three times as large as that of Washington driven by the magnitude of its AAL. When comparing the individual state's earthquake premium to a countrywide premium, the four largest earthquake states receive a subsidy, and the remaining states provide subsidies. The subsidy for California is approximately 84% of their earthquake premium.

## Limitations and Qualifications

### Qualifications

The undersigned professionals are currently members in good standing of the American Academy of Actuaries (AAA) and the Casualty Actuarial Society (CAS), and have satisfied the current continuing education requirements of the CAS and the AAA.

### Use of Report

The data and exhibits in this report are provided to support the conclusions contained herein, limited to the scope of work specified by NAR, and may not be suitable for other purposes. Milliman is available to answer any questions regarding this report or any other aspect of our review.

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#### Data Reliances

In performing this analysis we relied upon information obtained from NAR, Black Knight, catastrophe model output obtained from RMS and KatRisk, the United States Census, rate filings, SNL Market Intelligence Platform, the NAIC, and other sources. We have not audited or verified this data and information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete. In that event, the results of our analysis may not be suitable for the intended purpose.

We performed a limited review of the data used directly in our analysis for reasonableness and consistency. We did not find material defects in the data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or relationships that are materially inconsistent. Such a detailed review was beyond the scope of our assignment.

#### Model Reliances

Our analysis is based on two catastrophe models, one from KatRisk and one from RMS. We have reviewed the model output for reasonableness and consistency. However, no catastrophe model is entirely accurate. To the extent that one or both models are biased, the resulting rates may be biased.

#### Uncertainty

We based our results on generally accepted actuarial procedures and our professional judgment. Our results reflect assumptions that are built into the KatRisk and RMS models, as well as assumptions such as loss ratios, defense and cost containment expense ratios, loss development, trend, payout patterns, claim reporting patterns and other assumptions. However, due to the uncertainty associated with the estimation of rates and future loss payments and the inherent limitations of the data, actual results will vary from our projections. Our indications are based on long-term averages and results for any single year may vary significantly from those implied by the indications.

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National Association of Realtors  
Homeowners  
Countrywide (excluding Alaska and Hawaii)

**Premium Subsidy Received / (Paid) - Medium Reinsurance**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
State	Average Coverage A (Note 1)	Average HO3 Premium (Note 2)	Hurricane Wind (Note 3)	Severe Convective Storm (Note 3)	Inland Flood (Note 3)	Storm Surge (Note 3)	Earthquake (Note 3)	Total Flood (Note 4)	Earthquake + Total Flood (Note 5)	All CAT Perils (Note 6)
AL	\$215,625	\$1,358	\$106	\$195	\$7	(\$50)	(\$261)	(\$43)	(\$304)	(\$3)
AR	204,247	1,312	(126)	377	39	(69)	(100)	(30)	(131)	121
AZ	261,709	810	(161)	(104)	2	(89)	(309)	(86)	(396)	(661)
CA	392,517	986	(242)	(298)	48	(133)	2,607	(85)	2,522	1,983
CO	311,607	1,383	(192)	473	(19)	(105)	(392)	(125)	(517)	(235)
CT	380,840	1,411	28	(243)	(26)	(37)	(442)	(63)	(505)	(720)
DE	306,804	780	(53)	(189)	(33)	(26)	(371)	(60)	(431)	(673)
FL	266,037	1,993	1,023	(137)	(30)	584	(335)	554	219	1,105
GA	259,888	1,152	(63)	14	(50)	(41)	(317)	(91)	(408)	(456)
IA	217,491	919	(134)	288	(15)	(74)	(277)	(89)	(366)	(212)
ID	247,058	692	(152)	(180)	31	(84)	(243)	(53)	(295)	(627)
IL	313,494	1,033	(193)	79	(40)	(106)	(362)	(146)	(508)	(621)
IN	227,470	983	(140)	143	(24)	(77)	(264)	(101)	(365)	(362)
KS	226,028	1,531	(139)	1,021	(17)	(77)	(287)	(93)	(380)	502
KY	216,626	1,062	(133)	188	74	(73)	(227)	1	(226)	(172)
LA	218,263	1,945	941	2	81	651	(271)	731	461	1,403
MA	403,383	1,379	108	(283)	(98)	(91)	(444)	(189)	(633)	(808)
MD	324,307	982	(140)	(140)	(103)	(96)	(399)	(199)	(597)	(877)
ME	278,654	843	(37)	(204)	(57)	262	(262)	205	(57)	(299)
MI	255,182	908	(157)	(93)	(46)	(86)	(317)	(132)	(449)	(698)
MN	283,536	1,323	(174)	325	(59)	(96)	(361)	(155)	(516)	(365)
MO	246,353	1,253	(152)	378	(35)	(83)	(189)	(118)	(307)	(80)
MS	196,171	1,508	225	183	(31)	17	(177)	(14)	(191)	217
MT	248,439	1,081	(153)	33	140	(84)	(222)	56	(166)	(286)
NC	242,051	1,075	130	(53)	16	(21)	(301)	(6)	(307)	(229)
ND	232,928	1,200	(143)	221	4	(79)	(296)	(75)	(371)	(294)
NE	209,802	1,360	(129)	639	(47)	(71)	(265)	(118)	(383)	126
NH	314,198	941	(94)	(223)	146	(79)	(311)	67	(244)	(562)
NJ	397,955	1,149	(63)	(255)	26	(61)	(448)	(36)	(483)	(801)
NM	247,288	982	(152)	(37)	10	(84)	(252)	(73)	(325)	(514)
NV	294,057	737	(181)	(216)	(3)	(100)	(1)	(102)	(103)	(500)
NY	350,958	1,287	(28)	(212)	7	(58)	(389)	(51)	(440)	(680)
OH	238,773	819	(147)	(2)	(43)	(81)	(292)	(124)	(415)	(565)
OK	206,500	1,879	(127)	948	(12)	(70)	(234)	(82)	(316)	505
OR	281,917	643	(173)	(212)	87	(95)	149	(8)	141	(245)
PA	278,478	913	(142)	(137)	64	(94)	(344)	(30)	(374)	(654)
RI	336,730	1,446	354	(220)	(136)	(82)	(394)	(219)	(612)	(479)
SC	244,764	1,284	289	(12)	(30)	307	(12)	278	265	542
SD	220,461	1,096	(136)	299	13	(75)	(274)	(62)	(335)	(172)
TN	227,411	1,149	(140)	230	34	(77)	(117)	(43)	(160)	(70)
TX	232,170	1,991	225	212	35	224	(291)	259	(32)	404
UT	275,266	673	(169)	(179)	(2)	(93)	416	(96)	320	(28)
VA	304,787	946	(81)	(119)	(33)	(63)	(370)	(96)	(466)	(666)
VT	309,075	873	(168)	(209)	355	(105)	(332)	251	(81)	(458)
WA	313,929	811	(193)	(241)	(22)	(106)	497	(129)	369	(65)
WI	261,826	750	(161)	23	(58)	(89)	(332)	(146)	(478)	(616)
WV	217,739	907	(129)	(46)	264	(74)	(270)	190	(79)	(255)
WY	248,859	1,088	(153)	140	150	(84)	(220)	65	(154)	(168)
Total	\$283,200	\$1,173								

**Notes:**

- Column (2) contains the average Coverage A used in modeling at a statewide level.
- Column (3) contains the average HO3 premium from the 2017 NAIC Homeowners Insurance Report [http://www.naic.org/prod\\_serv/HMR-ZU-17.pdf](http://www.naic.org/prod_serv/HMR-ZU-17.pdf) (p. 37-140)
- Columns (4) to (8) = Estimated Average Premium (Exhibit 3) - Coverage A Adjusted Subsidized Premium (Exhibit 2).
- Column (9) = Column (6) + Column (7).
- Column (10) = Column (8) + Column (9).
- Column (11) = Sum of Columns (4) to (8).



National Association of Realtors  
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**Premium Subsidy Received / (Paid) - High Reinsurance**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
State	Average Coverage A (Note 1)	Average HO3 Premium (Note 2)	Hurricane Wind (Note 3)	Severe Convective Storm (Note 3)	Inland Flood (Note 3)	Storm Surge (Note 3)	Earthquake (Note 3)	Total Flood (Note 4)	Earthquake + Total Flood (Note 5)	All CAT Perils (Note 6)
AL	\$215,625	\$1,358	\$111	\$195	\$8	(\$53)	(\$346)	(\$45)	(\$390)	(\$84)
AR	204,247	1,312	(132)	377	41	(73)	(132)	(32)	(164)	81
AZ	261,709	810	(169)	(104)	2	(93)	(409)	(90)	(499)	(773)
CA	392,517	986	(253)	(298)	50	(139)	3,446	(89)	3,357	2,806
CO	311,607	1,383	(201)	473	(20)	(111)	(518)	(131)	(649)	(377)
CT	380,840	1,411	30	(243)	(27)	(39)	(584)	(66)	(650)	(864)
DE	306,804	780	(56)	(189)	(35)	(27)	(491)	(63)	(553)	(798)
FL	266,037	1,993	1,074	(137)	(31)	612	(443)	581	139	1,075
GA	259,888	1,152	(66)	14	(53)	(43)	(419)	(95)	(514)	(566)
IA	217,491	919	(140)	288	(16)	(77)	(367)	(93)	(460)	(312)
ID	247,058	692	(159)	(180)	32	(88)	(321)	(55)	(376)	(715)
IL	313,494	1,033	(202)	79	(42)	(111)	(478)	(153)	(631)	(754)
IN	227,470	983	(147)	143	(25)	(81)	(349)	(106)	(455)	(459)
KS	226,028	1,531	(146)	1,021	(17)	(80)	(379)	(98)	(477)	398
KY	216,626	1,062	(140)	188	78	(77)	(300)	1	(299)	(252)
LA	218,263	1,945	987	2	85	682	(358)	767	409	1,398
MA	403,383	1,379	114	(283)	(103)	(96)	(587)	(198)	(786)	(955)
MD	324,307	982	(147)	(140)	(108)	(101)	(527)	(208)	(735)	(1,022)
ME	278,654	843	(39)	(204)	(60)	274	(347)	215	(132)	(375)
MI	255,182	908	(165)	(93)	(48)	(91)	(419)	(138)	(557)	(815)
MN	283,536	1,323	(183)	325	(62)	(101)	(477)	(162)	(640)	(497)
MO	246,353	1,253	(159)	378	(36)	(87)	(249)	(124)	(373)	(154)
MS	196,171	1,508	236	183	(32)	18	(234)	(15)	(249)	171
MT	248,439	1,081	(160)	33	147	(88)	(293)	58	(235)	(363)
NC	242,051	1,075	136	(53)	16	(22)	(398)	(6)	(404)	(320)
ND	232,928	1,200	(150)	221	4	(83)	(392)	(79)	(470)	(400)
NE	209,802	1,360	(135)	639	(50)	(74)	(350)	(124)	(475)	29
NH	314,198	941	(99)	(223)	153	(83)	(411)	70	(341)	(663)
NJ	397,955	1,149	(66)	(255)	27	(64)	(592)	(37)	(629)	(950)
NM	247,288	982	(160)	(37)	11	(88)	(333)	(77)	(410)	(607)
NV	294,057	737	(190)	(216)	(3)	(104)	(1)	(107)	(108)	(514)
NY	350,958	1,287	(30)	(212)	7	(61)	(514)	(54)	(568)	(809)
OH	238,773	819	(154)	(2)	(45)	(85)	(385)	(130)	(515)	(672)
OK	206,500	1,879	(133)	948	(12)	(73)	(310)	(86)	(395)	419
OR	281,917	643	(182)	(212)	92	(100)	197	(9)	189	(205)
PA	278,478	913	(149)	(137)	67	(99)	(455)	(32)	(487)	(773)
RI	336,730	1,446	372	(220)	(143)	(86)	(520)	(229)	(750)	(599)
SC	244,764	1,284	303	(12)	(31)	322	(16)	291	275	566
SD	220,461	1,096	(142)	299	13	(78)	(362)	(65)	(426)	(270)
TN	227,411	1,149	(147)	230	36	(81)	(154)	(45)	(199)	(116)
TX	232,170	1,991	236	212	36	235	(385)	271	(113)	334
UT	275,266	673	(178)	(179)	(3)	(98)	550	(100)	450	93
VA	304,787	946	(85)	(119)	(34)	(66)	(490)	(100)	(590)	(794)
VT	309,075	873	(176)	(209)	373	(110)	(439)	263	(176)	(561)
WA	313,929	811	(203)	(241)	(23)	(111)	657	(135)	522	79
WI	261,826	750	(169)	23	(60)	(93)	(439)	(153)	(593)	(739)
WV	217,739	907	(135)	(46)	277	(77)	(356)	200	(157)	(339)
WY	248,859	1,088	(161)	140	157	(88)	(290)	69	(222)	(243)
Total	\$283,200	\$1,173								

**Notes:**

- Column (2) contains the average Coverage A used in modeling at a statewide level.
- Column (3) contains the average HO3 premium from the 2017 NAIC Homeowners Insurance Report [http://www.naic.org/prod\\_serv/HMR-ZU-17.pdf](http://www.naic.org/prod_serv/HMR-ZU-17.pdf) (p. 37-140)
- Columns (4) to (8) = Estimated Average Premium (Exhibit 3) - Coverage A Adjusted Subsidized Premium (Exhibit 2).
- Column (9) = Column (6) + Column (7).
- Column (10) = Column (8) + Column (9).
- Column (11) = Sum of Columns (4) to (8).

National Association of Realtors  
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Countrywide (excluding Alaska and Hawaii)

**Premium Subsidy Received / (Paid) - Low Reinsurance**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
State	Average Coverage A (Note 1)	Average HO3 Premium (Note 2)	Hurricane Wind (Note 3)	Severe Convective Storm (Note 3)	Inland Flood (Note 3)	Storm Surge (Note 3)	Earthquake (Note 3)	Total Flood (Note 4)	Earthquake + Total Flood (Note 5)	All CAT Perils (Note 6)
AL	\$215,625	\$1,358	\$101	\$195	\$7	(\$48)	(\$177)	(\$41)	(\$218)	\$78
AR	204,247	1,312	(120)	377	37	(66)	(68)	(29)	(97)	160
AZ	261,709	810	(154)	(104)	2	(85)	(210)	(82)	(292)	(550)
CA	392,517	986	(231)	(298)	46	(127)	1,768	(81)	1,687	1,158
CO	311,607	1,383	(183)	473	(18)	(101)	(266)	(119)	(385)	(95)
CT	380,840	1,411	27	(243)	(25)	(35)	(300)	(60)	(360)	(576)
DE	306,804	780	(51)	(189)	(32)	(25)	(252)	(57)	(309)	(549)
FL	266,037	1,993	978	(137)	(28)	558	(227)	529	302	1,143
GA	259,888	1,152	(60)	14	(48)	(39)	(215)	(87)	(302)	(347)
IA	217,491	919	(128)	288	(15)	(70)	(188)	(85)	(273)	(113)
ID	247,058	692	(145)	(180)	29	(80)	(164)	(51)	(215)	(540)
IL	313,494	1,033	(184)	79	(38)	(101)	(245)	(139)	(385)	(490)
IN	227,470	983	(134)	143	(23)	(74)	(179)	(97)	(275)	(266)
KS	226,028	1,531	(133)	1,021	(16)	(73)	(194)	(89)	(283)	605
KY	216,626	1,062	(127)	188	71	(70)	(154)	1	(153)	(93)
LA	218,263	1,945	899	2	77	621	(184)	699	515	1,415
MA	403,383	1,379	103	(283)	(93)	(87)	(301)	(181)	(482)	(661)
MD	324,307	982	(134)	(140)	(98)	(92)	(270)	(190)	(460)	(734)
ME	278,654	843	(35)	(204)	(54)	250	(178)	196	18	(222)
MI	255,182	908	(150)	(93)	(44)	(83)	(215)	(126)	(341)	(584)
MN	283,536	1,323	(167)	325	(56)	(92)	(245)	(148)	(393)	(234)
MO	246,353	1,253	(145)	378	(33)	(80)	(128)	(113)	(241)	(7)
MS	196,171	1,508	215	183	(29)	16	(120)	(13)	(133)	265
MT	248,439	1,081	(146)	33	133	(80)	(150)	53	(97)	(211)
NC	242,051	1,075	124	(53)	15	(20)	(204)	(6)	(210)	(138)
ND	232,928	1,200	(137)	221	4	(75)	(201)	(71)	(272)	(189)
NE	209,802	1,360	(123)	639	(45)	(68)	(180)	(113)	(293)	222
NH	314,198	941	(90)	(223)	139	(76)	(211)	64	(147)	(460)
NJ	397,955	1,149	(60)	(255)	24	(58)	(304)	(34)	(338)	(653)
NM	247,288	982	(145)	(37)	10	(80)	(171)	(70)	(241)	(423)
NV	294,057	737	(173)	(216)	(3)	(95)	(1)	(98)	(98)	(487)
NY	350,958	1,287	(27)	(212)	7	(56)	(264)	(49)	(313)	(551)
OH	238,773	819	(140)	(2)	(41)	(77)	(198)	(118)	(316)	(459)
OK	206,500	1,879	(121)	948	(11)	(67)	(159)	(78)	(237)	590
OR	281,917	643	(166)	(212)	83	(91)	101	(8)	93	(285)
PA	278,478	913	(136)	(137)	61	(90)	(233)	(29)	(262)	(535)
RI	336,730	1,446	338	(220)	(130)	(78)	(267)	(209)	(476)	(358)
SC	244,764	1,284	276	(12)	(28)	294	(8)	265	257	521
SD	220,461	1,096	(130)	299	12	(71)	(185)	(59)	(245)	(75)
TN	227,411	1,149	(134)	230	33	(74)	(79)	(41)	(120)	(24)
TX	232,170	1,991	215	212	33	214	(197)	247	50	476
UT	275,266	673	(162)	(179)	(2)	(89)	282	(91)	191	(150)
VA	304,787	946	(77)	(119)	(31)	(60)	(251)	(91)	(343)	(539)
VT	309,075	873	(161)	(209)	339	(100)	(225)	239	14	(355)
WA	313,929	811	(185)	(241)	(21)	(102)	337	(123)	214	(211)
WI	261,826	750	(154)	23	(55)	(85)	(225)	(140)	(365)	(496)
WV	217,739	907	(123)	(46)	252	(70)	(183)	182	(1)	(171)
WY	248,859	1,088	(146)	140	143	(80)	(149)	62	(86)	(93)
Total	\$283,200	\$1,173								

**Notes:**

- Column (2) contains the average Coverage A used in modeling at a statewide level.
- Column (3) contains the average HO3 premium from the 2017 NAIC Homeowners Insurance Report [http://www.naic.org/prod\\_serv/HMR-ZU-17.pdf](http://www.naic.org/prod_serv/HMR-ZU-17.pdf) (p. 37-140)
- Columns (4) to (8) = Estimated Average Premium (Exhibit 3) - Coverage A Adjusted Subsidized Premium (Exhibit 2).
- Column (9) = Column (6) + Column (7).
- Column (10) = Column (8) + Column (9).
- Column (11) = Sum of Columns (4) to (8).

National Association of Realtors  
Homeowners  
Countrywide (excluding Alaska and Hawaii)

**Coverage A Adjusted Subsidized Premium - Medium Reinsurance**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
State	Number of Single Family Residences (Note 1)	Average Coverage A (Note 1)	Hurricane Wind (Note 3)	Severe Convective Storm (Note 3)	Inland Flood (Note 3)	Storm Surge (Note 3)	Earthquake (Note 3)	Total Flood (Note 4)	Earthquake + Total Flood (Note 5)	All CAT Perils (Note 6)
AL	1,092,645	\$215,625	\$133	\$168	\$137	\$73	\$278	\$210	\$488	\$788
AR	647,668	204,247	126	159	130	69	263	199	462	747
AZ	1,377,849	261,709	161	204	167	89	337	255	592	957
CA	6,214,642	392,517	242	306	250	133	506	383	888	1,435
CO	1,229,618	311,607	192	243	198	105	401	304	705	1,139
CT	782,536	380,840	234	296	242	129	491	371	862	1,393
DE	222,625	306,804	189	239	195	104	395	299	694	1,122
FL	3,896,585	266,037	164	207	169	90	343	259	602	973
GA	2,023,345	259,888	160	202	165	88	335	253	588	950
IA	833,425	217,491	134	169	138	74	280	212	492	795
ID	382,858	247,058	152	192	157	84	318	241	559	903
IL	2,709,196	313,494	193	244	200	106	404	306	709	1,146
IN	1,635,560	227,470	140	177	145	77	293	222	515	832
KS	691,742	226,028	139	176	144	77	291	220	512	827
KY	995,989	216,626	133	169	138	73	279	211	490	792
LA	938,984	218,263	134	170	139	74	281	213	494	798
MA	1,328,632	403,383	248	314	257	137	520	393	913	1,475
MD	1,349,262	324,307	200	252	206	110	418	316	734	1,186
ME	332,072	278,654	171	217	177	94	359	272	631	1,019
MI	2,532,246	255,182	157	199	162	86	329	249	577	933
MN	1,427,166	283,536	174	221	180	96	365	276	642	1,037
MO	1,438,147	246,353	152	192	157	83	317	240	558	901
MS	618,791	196,171	121	153	125	66	253	191	444	717
MT	245,708	248,439	153	193	158	84	320	242	562	908
NC	2,152,787	242,051	149	188	154	82	312	236	548	885
ND	181,057	232,928	143	181	148	79	300	227	527	852
NE	469,183	209,802	129	163	134	71	270	205	475	767
NH	321,118	314,198	193	245	200	106	405	306	711	1,149
NJ	1,770,188	397,955	245	310	253	135	513	388	901	1,455
NM	419,093	247,288	152	192	157	84	319	241	560	904
NV	517,101	294,057	181	229	187	100	379	287	665	1,075
NY	2,960,984	350,958	216	273	223	119	452	342	794	1,283
OH	2,824,058	238,773	147	186	152	81	308	233	540	873
OK	858,935	206,500	127	161	131	70	266	201	467	755
OR	843,810	281,917	173	219	179	95	363	275	638	1,031
PA	3,163,679	278,478	171	217	177	94	359	272	630	1,018
RI	204,894	336,730	207	262	214	114	434	328	762	1,231
SC	1,064,253	244,764	151	191	156	83	315	239	554	895
SD	202,644	220,461	136	172	140	75	284	215	499	806
TN	1,498,419	227,411	140	177	145	77	293	222	515	832
TX	5,302,141	232,170	143	181	148	79	299	226	525	849
UT	618,925	275,266	169	214	175	93	355	268	623	1,007
VA	1,858,941	304,787	188	237	194	103	393	297	690	1,115
VT	155,853	309,075	190	241	197	105	398	301	699	1,130
WA	1,516,942	313,929	193	244	200	106	404	306	710	1,148
WI	1,432,487	261,826	161	204	167	89	337	255	593	957
WV	446,898	217,739	134	169	139	74	280	212	493	796
WY	133,181	248,859	153	194	158	84	321	243	563	910
Total	65,864,862	\$283,200	\$174	\$220	\$180	\$96	\$365	\$276	\$641	\$1,036

Overall estimated rate per 1000 Coverage A (Note 7)      \$0.62      \$0.78      \$0.64      \$0.34      \$1.29      \$0.98      \$2.26      \$3.66

**Notes:**

- Column (2) contains the average Coverage A used in modeling at a statewide level.
- Column (3) contains the average Coverage A at a statewide level
- Columns (4) to (8) calculated as Overall estimated rate per 1000 Coverage A \* State average Coverage A / 1000.
- Column (9) = Column (6) + Column (7).
- Column (10) = Column (8) + Column (9).
- Column (11) = Sum of Columns (4) to (8).
- Overall estimated rate per 1000 Coverage A = Overall average premium by peril / (Overall average Coverage A / 1000)

National Association of Realtors  
Homeowners  
Countrywide (excluding Alaska and Hawaii)

**Coverage A Adjusted Subsidized Premium - High Reinsurance**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
State	Number of Single Family Residences (Note 1)	Average Coverage A (Note 1)	Hurricane Wind (Note 3)	Severe Convective Storm (Note 3)	Inland Flood (Note 3)	Storm Surge (Note 3)	Earthquake (Note 3)	Total Flood (Note 4)	Earthquake + Total Flood (Note 5)	All CAT Perils (Note 6)
AL	1,092,645	\$215,625	\$139	\$168	\$144	\$77	\$367	\$221	\$588	\$895
AR	647,668	204,247	132	159	136	73	348	209	557	848
AZ	1,377,849	261,709	169	204	175	93	446	268	713	1,086
CA	6,214,642	392,517	253	306	262	139	668	402	1,070	1,629
CO	1,229,618	311,607	201	243	208	111	531	319	849	1,293
CT	782,536	380,840	246	296	254	135	648	390	1,038	1,580
DE	222,625	306,804	198	239	205	109	522	314	836	1,273
FL	3,896,585	266,037	172	207	178	94	453	272	725	1,104
GA	2,023,345	259,888	168	202	174	92	442	266	708	1,078
IA	833,425	217,491	140	169	145	77	370	222	593	902
ID	382,858	247,058	159	192	165	88	421	253	673	1,025
IL	2,709,196	313,494	202	244	209	111	534	321	854	1,301
IN	1,635,560	227,470	147	177	152	81	387	233	620	944
KS	691,742	226,028	146	176	151	80	385	231	616	938
KY	995,989	216,626	140	169	145	77	369	222	590	899
LA	938,984	218,263	141	170	146	78	372	223	595	906
MA	1,328,632	403,383	260	314	269	143	687	413	1,099	1,674
MD	1,349,262	324,307	209	252	217	115	552	332	884	1,346
ME	332,072	278,654	180	217	186	99	474	285	759	1,156
MI	2,532,246	255,182	165	199	170	91	434	261	696	1,059
MN	1,427,166	283,536	183	221	189	101	483	290	773	1,177
MO	1,438,147	246,353	159	192	165	87	419	252	671	1,022
MS	618,791	196,171	127	153	131	70	334	201	535	814
MT	245,708	248,439	160	193	166	88	423	254	677	1,031
NC	2,152,787	242,051	156	188	162	86	412	248	660	1,004
ND	181,057	232,928	150	181	156	83	397	238	635	967
NE	469,183	209,802	135	163	140	74	357	215	572	871
NH	321,118	314,198	203	245	210	112	535	321	856	1,304
NJ	1,770,188	397,955	257	310	266	141	678	407	1,085	1,651
NM	419,093	247,288	160	192	165	88	421	253	674	1,026
NV	517,101	294,057	190	229	196	104	501	301	801	1,220
NY	2,960,984	350,958	227	273	234	125	598	359	957	1,456
OH	2,824,058	238,773	154	186	159	85	407	244	651	991
OK	858,935	206,500	133	161	138	73	352	211	563	857
OR	843,810	281,917	182	219	188	100	480	288	768	1,170
PA	3,163,679	278,478	180	217	186	99	474	285	759	1,156
RI	204,894	336,730	217	262	225	120	573	344	918	1,397
SC	1,064,253	244,764	158	191	163	87	417	250	667	1,016
SD	202,644	220,461	142	172	147	78	375	226	601	915
TN	1,498,419	227,411	147	177	152	81	387	233	620	944
TX	5,302,141	232,170	150	181	155	82	395	237	633	963
UT	618,925	275,266	178	214	184	98	469	282	750	1,142
VA	1,858,941	304,787	197	237	204	108	519	312	831	1,265
VT	155,853	309,075	200	241	206	110	526	316	842	1,282
WA	1,516,942	313,929	203	244	210	111	535	321	856	1,303
WI	1,432,487	261,826	169	204	175	93	446	268	714	1,086
WV	446,898	217,739	141	169	145	77	371	223	593	904
WY	133,181	248,859	161	194	166	88	424	255	678	1,033
Total	65,864,862	\$283,200	\$183	\$220	\$189	\$101	\$482	\$290	\$772	\$1,175

Overall Estimated Rate per 1000 Coverage A (Note 7)      \$0.65      \$0.78      \$0.67      \$0.36      \$1.70      \$1.02      \$2.73      \$4.15

**Notes:**

1. Column (2) contains the average Coverage A used in modeling at a statewide level.
2. Column (3) contains the average Coverage A at a statewide level
3. Columns (4) to (8) calculated as Overall estimated rate per 1000 Coverage A \* State average Coverage A / 1000.
4. Column (9) = Column (6) + Column (7).
5. Column (10) = Column (8) + Column (9).
6. Column (11) = Sum of Columns (4) to (8).
7. Overall estimated rate per 1000 Coverage A = Overall average premium by peril / (Overall average Coverage A / 1000)

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**Coverage A Adjusted Subsidized Premium - Low Reinsurance**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
State	Number of Single Family Residences (Note 1)	Average Coverage A (Note 1)	Hurricane Wind (Note 3)	Severe Convective Storm (Note 3)	Inland Flood (Note 3)	Storm Surge (Note 3)	Earthquake (Note 3)	Total Flood (Note 4)	Earthquake + Total Flood (Note 5)	All CAT Perils (Note 6)
AL	1,092,645	\$215,625	\$127	\$168	\$131	\$70	\$188	\$201	\$389	\$684
AR	647,668	204,247	120	159	124	66	178	190	369	648
AZ	1,377,849	261,709	154	204	159	85	229	244	472	830
CA	6,214,642	392,517	231	306	239	127	343	366	708	1,245
CO	1,229,618	311,607	183	243	189	101	272	290	562	988
CT	782,536	380,840	224	296	232	123	333	355	687	1,208
DE	222,625	306,804	180	239	187	99	268	286	554	973
FL	3,896,585	266,037	156	207	162	86	232	248	480	844
GA	2,023,345	259,888	153	202	158	84	227	242	469	824
IA	833,425	217,491	128	169	132	70	190	203	393	690
ID	382,858	247,058	145	192	150	80	216	230	446	783
IL	2,709,196	313,494	184	244	191	101	274	292	566	994
IN	1,635,560	227,470	134	177	138	74	199	212	411	721
KS	691,742	226,028	133	176	137	73	197	211	408	717
KY	995,989	216,626	127	169	132	70	189	202	391	687
LA	938,984	218,263	128	170	133	71	191	203	394	692
MA	1,328,632	403,383	237	314	245	130	352	376	728	1,279
MD	1,349,262	324,307	191	252	197	105	283	302	585	1,028
ME	332,072	278,654	164	217	169	90	243	260	503	884
MI	2,532,246	255,182	150	199	155	83	223	238	461	809
MN	1,427,166	283,536	167	221	172	92	248	264	512	899
MO	1,438,147	246,353	145	192	150	80	215	229	445	781
MS	618,791	196,171	115	153	119	63	171	183	354	622
MT	245,708	248,439	146	193	151	80	217	231	448	788
NC	2,152,787	242,051	142	188	147	78	211	225	437	768
ND	181,057	232,928	137	181	142	75	203	217	420	739
NE	469,183	209,802	123	163	128	68	183	195	379	665
NH	321,118	314,198	185	245	191	102	274	293	567	996
NJ	1,770,188	397,955	234	310	242	129	348	371	718	1,262
NM	419,093	247,288	145	192	150	80	216	230	446	784
NV	517,101	294,057	173	229	179	95	257	274	531	932
NY	2,960,984	350,958	206	273	213	113	307	327	633	1,113
OH	2,824,058	238,773	140	186	145	77	209	222	431	757
OK	858,935	206,500	121	161	126	67	180	192	373	655
OR	843,810	281,917	166	219	171	91	246	263	509	894
PA	3,163,679	278,478	164	217	169	90	243	259	503	883
RI	204,894	336,730	198	262	205	109	294	314	608	1,068
SC	1,064,253	244,764	144	191	149	79	214	228	442	776
SD	202,644	220,461	130	172	134	71	193	205	398	699
TN	1,498,419	227,411	134	177	138	74	199	212	410	721
TX	5,302,141	232,170	136	181	141	75	203	216	419	736
UT	618,925	275,266	162	214	167	89	240	256	497	873
VA	1,858,941	304,787	179	237	185	99	266	284	550	966
VT	155,853	309,075	182	241	188	100	270	288	558	980
WA	1,516,942	313,929	185	244	191	102	274	292	567	995
WI	1,432,487	261,826	154	204	159	85	229	244	473	830
WV	446,898	217,739	128	169	132	70	190	203	393	690
WY	133,181	248,859	146	194	151	80	217	232	449	789
<b>Total</b>	<b>65,864,862</b>	<b>\$283,200</b>	<b>\$166</b>	<b>\$220</b>	<b>\$172</b>	<b>\$92</b>	<b>\$247</b>	<b>\$264</b>	<b>\$511</b>	<b>\$898</b>

Overall Estimated Rate per 1000 Coverage A (Note 7)      \$0.59      \$0.78      \$0.61      \$0.32      \$0.87      \$0.93      \$1.80      \$3.17

**Notes:**

1. Column (2) contains the average Coverage A used in modeling at a statewide level.
2. Column (3) contains the average Coverage A at a statewide level
3. Columns (4) to (8) calculated as Overall estimated rate per 1000 Coverage A \* State average Coverage A / 1000.
4. Column (9) = Column (6) + Column (7).
5. Column (10) = Column (8) + Column (9).
6. Column (11) = Sum of Columns (4) to (8).
7. Overall estimated rate per 1000 Coverage A = Overall average premium by peril / (Overall average Coverage A / 1000)

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**Estimated Average Premium - Medium Reinsurance**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
State	Number of Single Family Residences (Note 1)	Hurricane Wind (Note 3)	Severe Convective Storm (Note 3)	Inland Flood (Note 3)	Storm Surge (Note 3)	Earthquake (Note 3)	Total Flood (Note 4)	Earthquake + Total Flood (Note 5)	All CAT Perils (Note 6)
AL	1,092,645	\$239	\$363	\$145	\$23	\$16	\$168	\$184	\$785
AR	647,668	0	536	169	0	163	169	332	867
AZ	1,377,849	0	100	169	0	28	169	197	296
CA	6,214,642	0	8	298	0	3,112	298	3,410	3,418
CO	1,229,618	0	716	179	0	9	179	188	904
CT	782,536	263	53	216	92	49	308	357	672
DE	222,625	136	50	162	78	24	240	264	449
FL	3,896,585	1,187	70	140	674	8	813	821	2,078
GA	2,023,345	97	216	115	47	18	163	180	494
IA	833,425	0	457	123	0	3	123	126	583
ID	382,858	0	13	188	0	76	188	264	276
IL	2,709,196	0	323	160	0	42	160	202	525
IN	1,635,560	0	320	121	0	29	121	150	470
KS	691,742	0	1,197	127	0	4	127	132	1,329
KY	995,989	0	356	212	0	52	212	264	620
LA	938,984	1,075	172	220	724	10	944	955	2,201
MA	1,328,632	356	31	159	45	75	204	280	667
MD	1,349,262	59	113	104	14	19	118	137	309
ME	332,072	134	13	121	356	97	476	573	720
MI	2,532,246	0	106	117	0	12	117	129	235
MN	1,427,166	0	546	122	0	4	122	126	672
MO	1,438,147	0	570	122	0	129	122	251	821
MS	618,791	346	336	94	83	75	177	253	935
MT	245,708	0	226	298	0	98	298	396	622
NC	2,152,787	279	136	170	60	11	230	241	656
ND	181,057	0	402	152	0	4	152	156	558
NE	469,183	0	802	86	0	5	86	91	893
NH	321,118	99	21	346	27	94	373	467	587
NJ	1,770,188	182	55	279	74	65	353	417	654
NM	419,093	0	156	168	0	66	168	234	390
NV	517,101	0	13	184	0	378	184	562	576
NY	2,960,984	188	61	230	61	63	291	354	603
OH	2,824,058	0	183	109	0	16	109	125	309
OK	858,935	0	1,109	120	0	32	120	151	1,260
OR	843,810	0	7	267	0	512	267	779	786
PA	3,163,679	29	80	241	0	15	241	256	365
RI	204,894	561	42	78	32	40	110	150	753
SC	1,064,253	439	178	126	390	303	516	819	1,437
SD	202,644	0	470	153	0	10	153	164	634
TN	1,498,419	0	407	179	0	176	179	355	762
TX	5,302,141	367	392	182	303	8	485	493	1,253
UT	618,925	0	35	173	0	770	173	943	978
VA	1,858,941	107	118	161	40	22	202	224	448
VT	155,853	22	32	552	0	66	552	618	672
WA	1,516,942	0	3	178	0	902	178	1,079	1,083
WI	1,432,487	0	227	109	0	5	109	114	341
WV	446,898	5	123	403	0	11	403	413	542
WY	133,181	0	333	308	0	101	308	409	742
Total (Note 2)	65,864,862	\$174	\$220	\$180	\$96	\$365	\$276	\$641	\$1,036

**Notes:**

1. Column (2) contains the average Coverage A used in modeling at a statewide level.
2. Totals weighted based on Number of Single Family Residences (Column 2).
3. Column (3) through (7) calculated using premium calculation algorithm detailed in Exhibit 5.
4. Column (8) = Column (5) + Column (6).
5. Column (9) = Column (7) + Column (8).
6. Column (10) = Sum of Columns (3) to (7).



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**Estimated Average Premium - High Reinsurance**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
State	Number of Single Family Residences (Note 1)	Hurricane Wind (Note 3)	Severe Convective Storm (Note 3)	Inland Flood (Note 3)	Storm Surge (Note 3)	Earthquake (Note 3)	Total Flood (Note 4)	Earthquake + Total Flood (Note 5)	All CAT Perils (Note 6)
AL	1,092,645	\$251	\$363	\$152	\$24	\$22	\$176	\$197	\$810
AR	647,668	0	536	177	0	215	177	392	928
AZ	1,377,849	0	100	177	0	37	177	214	313
CA	6,214,642	0	8	313	0	4,114	313	4,427	4,435
CO	1,229,618	0	716	188	0	12	188	200	916
CT	782,536	276	53	227	97	64	323	388	716
DE	222,625	142	50	170	82	32	251	283	475
FL	3,896,585	1,245	70	147	707	10	853	864	2,179
GA	2,023,345	102	216	121	50	24	171	194	512
IA	833,425	0	457	129	0	4	129	133	590
ID	382,858	0	13	197	0	100	197	297	310
IL	2,709,196	0	323	168	0	56	168	223	546
IN	1,635,560	0	320	127	0	39	127	165	485
KS	691,742	0	1,197	134	0	6	134	139	1,336
KY	995,989	0	356	222	0	69	222	291	647
LA	938,984	1,128	172	231	760	14	991	1,004	2,304
MA	1,328,632	374	31	167	47	100	214	314	719
MD	1,349,262	62	113	109	15	25	123	149	324
ME	332,072	141	13	127	373	128	500	628	781
MI	2,532,246	0	106	123	0	16	123	138	244
MN	1,427,166	0	546	128	0	5	128	133	679
MO	1,438,147	0	570	128	0	170	128	298	868
MS	618,791	363	336	99	87	100	186	286	985
MT	245,708	0	226	312	0	130	312	442	668
NC	2,152,787	293	136	178	63	14	241	256	684
ND	181,057	0	402	160	0	5	160	165	567
NE	469,183	0	802	90	0	7	90	97	899
NH	321,118	104	21	363	28	124	391	515	640
NJ	1,770,188	191	55	293	77	86	370	456	701
NM	419,093	0	156	176	0	88	176	264	420
NV	517,101	0	13	194	0	500	194	693	706
NY	2,960,984	197	61	242	64	84	305	389	647
OH	2,824,058	0	183	114	0	21	114	136	319
OK	858,935	0	1,109	125	0	42	125	168	1,276
OR	843,810	0	7	280	0	677	280	957	964
PA	3,163,679	30	80	253	0	19	253	272	383
RI	204,894	589	42	82	33	53	115	168	799
SC	1,064,253	461	178	132	409	401	542	942	1,581
SD	202,644	0	470	161	0	14	161	174	645
TN	1,498,419	0	407	188	0	233	188	420	827
TX	5,302,141	385	392	191	317	11	509	519	1,297
UT	618,925	0	35	181	0	1,018	181	1,200	1,235
VA	1,858,941	112	118	169	42	29	211	241	471
VT	155,853	23	32	579	0	88	579	667	721
WA	1,516,942	0	3	186	0	1,192	186	1,378	1,382
WI	1,432,487	0	227	114	0	7	114	121	348
WV	446,898	5	123	422	0	14	422	437	565
WY	133,181	0	333	323	0	134	323	457	790
Total (Note 2)	65,864,862	\$183	\$220	\$189	\$101	\$482	\$290	\$772	\$1,175

**Notes:**

1. Column (2) contains the average Coverage A used in modeling at a statewide level.
2. Totals weighted based on Number of Single Family Residences (Column 2).
3. Column (3) through (7) calculated using premium calculation algorithm detailed in Exhibit 5.
4. Column (8) = Column (5) + Column (6).
5. Column (9) = Column (7) + Column (8).
6. Column (10) = Sum of Columns (3) to (7).

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**Estimated Average Premium - Low Reinsurance**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
State	Number of Single Family Residences (Note 1)	Hurricane Wind (Note 3)	Severe Convective Storm (Note 3)	Inland Flood (Note 3)	Storm Surge (Note 3)	Earthquake (Note 3)	Total Flood (Note 4)	Earthquake + Total Flood (Note 5)	All CAT Perils (Note 6)
AL	1,092,645	\$228	\$363	\$138	\$22	\$11	\$160	\$171	\$762
AR	647,668	0	536	161	0	110	161	272	807
AZ	1,377,849	0	100	161	0	19	161	180	280
CA	6,214,642	0	8	285	0	2,110	285	2,395	2,403
CO	1,229,618	0	716	171	0	6	171	177	893
CT	782,536	251	53	207	88	33	295	327	631
DE	222,625	130	50	155	74	16	229	245	424
FL	3,896,585	1,134	70	133	644	5	777	782	1,986
GA	2,023,345	93	216	110	45	12	155	167	477
IA	833,425	0	457	118	0	2	118	120	577
ID	382,858	0	13	180	0	51	180	231	244
IL	2,709,196	0	323	153	0	28	153	181	504
IN	1,635,560	0	320	115	0	20	115	135	455
KS	691,742	0	1,197	122	0	3	122	125	1,322
KY	995,989	0	356	202	0	35	202	238	594
LA	938,984	1,027	172	210	692	7	902	909	2,108
MA	1,328,632	341	31	152	43	51	195	246	618
MD	1,349,262	57	113	99	13	13	112	125	295
ME	332,072	128	13	115	340	66	455	521	662
MI	2,532,246	0	106	112	0	8	112	120	226
MN	1,427,166	0	546	116	0	3	116	119	665
MO	1,438,147	0	570	117	0	87	117	204	774
MS	618,791	331	336	90	80	51	170	221	887
MT	245,708	0	226	285	0	67	285	351	577
NC	2,152,787	267	136	162	58	7	220	227	629
ND	181,057	0	402	145	0	2	145	148	550
NE	469,183	0	802	82	0	4	82	86	888
NH	321,118	95	21	331	26	64	356	420	536
NJ	1,770,188	174	55	266	70	44	337	381	609
NM	419,093	0	156	160	0	45	160	205	361
NV	517,101	0	13	176	0	256	176	432	446
NY	2,960,984	179	61	220	58	43	278	321	562
OH	2,824,058	0	183	104	0	11	104	115	298
OK	858,935	0	1,109	114	0	22	114	136	1,244
OR	843,810	0	7	255	0	347	255	602	609
PA	3,163,679	28	80	230	0	10	230	240	348
RI	204,894	536	42	74	30	27	105	132	710
SC	1,064,253	420	178	120	373	205	493	699	1,297
SD	202,644	0	470	146	0	7	146	153	624
TN	1,498,419	0	407	171	0	119	171	290	697
TX	5,302,141	351	392	174	289	5	463	469	1,212
UT	618,925	0	35	165	0	522	165	687	722
VA	1,858,941	102	118	154	39	15	193	208	428
VT	155,853	21	32	527	0	45	527	572	625
WA	1,516,942	0	3	170	0	611	170	781	784
WI	1,432,487	0	227	104	0	3	104	108	334
WV	446,898	5	123	385	0	7	385	392	520
WY	133,181	0	333	294	0	68	294	363	696
Total (Note 2)	65,864,862	\$166	\$220	\$172	\$92	\$247	\$264	\$511	\$898

**Notes:**

1. Column (2) contains the average Coverage A used in modeling at a statewide level.
2. Totals weighted based on Number of Single Family Residences (Column 2).
3. Column (3) through (7) calculated using premium calculation algorithm detailed in Exhibit 5.
4. Column (8) = Column (5) + Column (6).
5. Column (9) = Column (7) + Column (8).
6. Column (10) = Sum of Columns (3) to (7).

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Homeowners  
Countrywide (excluding Alaska and Hawaii)

Average Loss

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
State	Number of Single Family Residences (Note 1)	Model Count (Note 2)	Hurricane Wind (Note 4)	Severe Convective Storm (Note 5)	Inland Flood (Note 6)	Storm Surge (Note 7)	Earthquake (Note 8)	Total Flood (Note 9)	Earthquake + Total Flood (Note 10)	All CAT Perils (Note 11)
AL	1,092,645	120,000	\$125	\$211	\$76	\$12	\$4	\$88	\$92	\$427
AR	647,668	70,000	0	312	88	0	39	88	128	439
AZ	1,377,849	150,000	0	58	88	0	7	88	95	153
CA	6,214,642	650,000	0	5	156	0	751	156	907	912
CO	1,229,618	130,000	0	416	94	0	2	94	96	512
CT	782,536	90,000	137	31	113	48	12	161	173	341
DE	222,625	30,000	71	29	85	41	6	125	131	231
FL	3,896,585	400,000	621	41	73	352	2	425	427	1,089
GA	2,023,345	220,000	51	126	60	25	4	85	89	266
IA	833,425	50,000	0	266	64	0	1	64	65	331
ID	382,858	40,000	0	7	98	0	18	98	117	124
IL	2,709,196	260,000	0	188	84	0	10	84	94	282
IN	1,635,560	100,000	0	186	63	0	7	63	70	256
KS	691,742	50,000	0	696	67	0	1	67	68	764
KY	995,989	50,000	0	207	111	0	13	111	123	330
LA	938,984	100,000	562	100	115	379	2	494	496	1,158
MA	1,328,632	140,000	186	18	83	24	18	107	125	330
MD	1,349,262	150,000	31	66	54	7	5	62	66	163
ME	332,072	40,000	70	7	63	186	23	249	272	350
MI	2,532,246	260,000	0	62	61	0	3	61	64	126
MN	1,427,166	100,000	0	318	64	0	1	64	65	382
MO	1,438,147	100,000	0	332	64	0	31	64	95	427
MS	618,791	70,000	181	195	49	44	18	93	111	487
MT	245,708	30,000	0	132	156	0	24	156	179	311
NC	2,152,787	230,000	146	79	89	32	3	120	123	348
ND	181,057	20,000	0	234	80	0	1	80	80	314
NE	469,183	50,000	0	466	45	0	1	45	46	513
NH	321,118	40,000	52	12	181	14	23	195	218	282
NJ	1,770,188	190,000	95	32	146	38	16	184	200	327
NM	419,093	50,000	0	91	88	0	16	88	104	194
NV	517,101	60,000	0	8	96	0	91	96	188	195
NY	2,960,984	310,000	98	36	120	32	15	152	167	301
OH	2,824,058	260,000	0	107	57	0	4	57	61	168
OK	858,935	90,000	0	645	63	0	8	63	70	715
OR	843,810	90,000	0	4	139	0	124	139	263	267
PA	3,163,679	330,000	15	46	126	0	4	126	130	191
RI	204,894	30,000	294	24	41	17	10	57	67	385
SC	1,064,253	120,000	230	104	66	204	73	270	343	676
SD	202,644	30,000	0	274	80	0	3	80	83	356
TN	1,498,419	160,000	0	237	94	0	43	94	136	373
TX	5,302,141	560,000	192	228	95	158	2	254	255	676
UT	618,925	50,000	0	20	90	0	186	90	276	297
VA	1,858,941	200,000	56	69	84	21	5	105	111	235
VT	155,853	20,000	12	18	289	0	16	289	305	334
WA	1,516,942	160,000	0	2	93	0	218	93	310	312
WI	1,432,487	100,000	0	132	57	0	1	57	58	190
WV	446,898	50,000	3	72	210	0	3	210	213	287
WY	133,181	20,000	0	194	161	0	24	161	185	379
Total (Note 3)	65,864,862	6,620,000	\$91	\$128	\$94	\$50	\$88	\$144	\$232	\$452

Notes:

- Column (2) contains the average Coverage A used in modeling at a statewide level.
- Column (3) is the count of records used for modeling AALs. CA Earthquake modeling was completed with 150,000 records.
- Totals weighted based on Number of Single Family Residences (Column 2)
- Calculated using RMS v17.0 long term with demand surge
- Calculated using RMS v17.0 high and low frequency with demand surge
- Calculated using KatRisk.
- Calculated as 50/50 weighting of KatRisk and RMS v17.0 long term with demand surge. RMS storm surge calculated as hurricane with storm surge less hurricane only.
- Calculated using RMS v17.0 (shake only) stochastic event rates with demand surge.
- Column (9) = Column (6) + Column (7).
- Column (10) = Column (8) + Column (9).
- Column (11) = Sum of Columns (4) to (8).

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**Estimated Statewide Loss (\$ Millions)**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
State	Number of Single Family Residences (Note 1)	Model Count (Note 2)	Hurricane Wind (Note 3)	Severe Convective Storm (Note 4)	Inland Flood (Note 5)	Storm Surge (Note 6)	Earthquake (Note 7)	Total Flood (Note 8)	Earthquake + Total Flood (Note 9)	All CAT Perils (Note 10)
AL	1,092,645	120,000	\$136	\$230	\$83	\$13	\$4	\$96	\$100	\$467
AR	647,668	70,000	0	202	57	0	25	57	83	284
AZ	1,377,849	150,000	0	80	122	0	9	122	131	211
CA	6,214,642	650,000	0	29	968	0	4,668	968	5,636	5,665
CO	1,229,618	130,000	0	512	115	0	3	115	118	630
CT	782,536	90,000	107	24	88	38	9	126	135	267
DE	222,625	30,000	16	6	19	9	1	28	29	51
FL	3,896,585	400,000	2,419	159	285	1,372	7	1,657	1,664	4,242
GA	2,023,345	220,000	103	255	122	50	9	172	181	538
IA	833,425	50,000	0	222	54	0	1	54	54	276
ID	382,858	40,000	0	3	38	0	7	38	45	47
IL	2,709,196	260,000	0	509	226	0	27	226	254	763
IN	1,635,560	100,000	0	304	103	0	12	103	115	419
KS	691,742	50,000	0	482	46	0	1	46	47	528
KY	995,989	50,000	0	206	110	0	13	110	123	329
LA	938,984	100,000	528	94	108	356	2	464	466	1,087
MA	1,328,632	140,000	248	24	111	31	24	142	166	438
MD	1,349,262	150,000	42	89	73	10	6	83	89	220
ME	332,072	40,000	23	2	21	62	8	83	90	116
MI	2,532,246	260,000	0	156	155	0	7	155	162	318
MN	1,427,166	100,000	0	453	91	0	1	91	92	545
MO	1,438,147	100,000	0	477	92	0	45	92	137	613
MS	618,791	70,000	112	121	30	27	11	57	69	301
MT	245,708	30,000	0	32	38	0	6	38	44	76
NC	2,152,787	230,000	314	170	191	68	6	259	265	749
ND	181,057	20,000	0	42	14	0	0	14	15	57
NE	469,183	50,000	0	219	21	0	1	21	22	241
NH	321,118	40,000	17	4	58	5	7	63	70	90
NJ	1,770,188	190,000	168	56	258	68	28	326	354	579
NM	419,093	50,000	0	38	37	0	7	37	43	81
NV	517,101	60,000	0	4	50	0	47	50	97	101
NY	2,960,984	310,000	291	106	356	94	45	450	496	892
OH	2,824,058	260,000	0	301	161	0	11	161	172	473
OK	858,935	90,000	0	554	54	0	7	54	60	614
OR	843,810	90,000	0	3	118	0	104	118	222	225
PA	3,163,679	330,000	48	147	399	0	11	399	410	605
RI	204,894	30,000	60	5	8	3	2	12	14	79
SC	1,064,253	120,000	245	110	70	217	78	287	365	720
SD	202,644	30,000	0	55	16	0	1	16	17	72
TN	1,498,419	160,000	0	355	140	0	64	140	204	559
TX	5,302,141	560,000	1,019	1,210	506	839	10	1,344	1,355	3,583
UT	618,925	50,000	0	13	56	0	115	56	171	184
VA	1,858,941	200,000	104	128	157	39	10	196	206	437
VT	155,853	20,000	2	3	45	0	2	45	47	52
WA	1,516,942	160,000	0	3	141	0	330	141	471	474
WI	1,432,487	100,000	0	189	82	0	2	82	83	272
WV	446,898	50,000	1	32	94	0	1	94	95	128
WY	133,181	20,000	0	26	21	0	3	21	25	51
Total	65,864,862	6,620,000	\$6,001	\$8,444	\$6,208	\$3,301	\$5,798	\$9,509	\$15,307	\$29,752

**Notes:**

- Column (2) contains the average Coverage A used in modeling at a statewide level.
- Column (3) is the count of records used for modeling AALs. CA Earthquake modeling was completed with 150,000 records.
- AALs calculated using RMS v17.0 long term with demand surge.  
Total Annual Loss calculated as AAL (Exhibit 4 Page 1) x Number of Single Family Residences (Column (2)) / 1,000,000.
- AALs calculated using RMS v17.0 high and low frequency with demand surge.  
Total Annual Loss calculated as AAL (Exhibit 4 Page 1) x Number of Single Family Residences (Column (2)) / 1,000,000.
- AALs calculated using KatRisk.  
Total Annual Loss calculated as AAL (Exhibit 4 Page 1) x Number of Single Family Residences (Column (2)) / 1,000,000.
- AALs calculated as 50/50 weighting of KatRisk and RMS v17.0 long term with demand surge. RMS storm surge calculated as hurricane with storm surge less hurricane only.  
Total Annual Loss calculated as AAL (Exhibit 4 Page 1) x Number of Single Family Residences (Column (2)) / 1,000,000.
- AALs calculated using RMS v17.0 (shake only) stochastic event rates with demand surge.  
Total Annual Loss calculated as AAL (Exhibit 4 Page 1) x Number of Single Family Residences (Column (2)) / 1,000,000.
- Column (9) = Column (6) + Column (7).
- Column (10) = Column (8) + Column (9).
- Column (11) = Sum of Columns (4) to (8).

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**Premium Calculation Example - South Carolina**

Item	(1) Hurricane Wind	(2) Severe Convective Storm	(3) Inland Flood	(4) Storm Surge	(5) Earthquake
A. AAL (Exhibit 4 Page 1) (Note 1)	\$230	\$104	\$66	\$204	\$73
B. Loss Adjustment Expense Percentage (Exhibit 6 Page 1)	17.7%	17.7%	17.7%	17.7%	17.7%
C. Average Annual Loss and Loss Adjustment Expense = $A \times (1 + B)$	\$271	\$122	\$78	\$240	\$86
D. Medium Reinsurance Expense Percentage of Premium (Exhibit 6 Page 2) (Note 2)	6.9%	0.0%	6.9%	6.9%	
E. Medium Earthquake Average Annual Loss Reinsurance Load (Exhibit 6 Page 2) (Note 3)					2.410
F. Total Expense ex. Loss Adjustment, Reinsurance and Profit (Exhibit 6 Page 1)	26.5%	26.5%	26.5%	26.5%	26.5%
G. Profit (Exhibit 6 Page 1)	5.0%	5.0%	5.0%	5.0%	5.0%
H. Premium = $C / (1 - D - F - G)$ (Note 4)	\$439	\$178	\$126	\$390	
I. Premium = $C \times E / (1 - F - G)$ (Note 5)					\$303

**Notes:**

1. AALs are from South Carolina. They are shown for the purpose of illustrating the premium calculations.
2. Applies only to Hurricane Wind, Inland Flood and Storm Surge perils. Severe Convective Storm assumed 0%. Earthquake uses a separate reinsurance expense methodology.
3. Applies only to the Earthquake peril.
4. Applies to all perils except Earthquake.
5. Applies to Earthquake peril only.

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**Expense, Profit, and Reinsurance Summary**

	(1)	(2)	(3)	(4)	(5)
Item	Allstate Corp. (SNL P&C Group) (Note 1)	Liberty Mutual (SNL P&C Group) (Note 1)	State Farm (SNL P&C Group) (Note 1)	Straight Average	Selected (Note 2)
A. Written Premium	\$7,903,531	\$6,228,875	\$17,610,240		
B. Earned Premium	\$7,913,372	\$6,147,450	\$17,718,794		
C. Commission and Brokerage Commission Percentage = C / A	\$945,024 12.0%	\$643,132 10.3%	\$2,080,402 11.8%	11.4%	11.4%
D. Other Acquisition Expenses Other Acquisition Percentage = D / A	\$383,457 4.9%	\$720,434 11.6%	\$1,570,067 8.9%	8.4%	8.4%
E. General Expenses General Expense Percentage = E / B	\$321,798 4.1%	\$327,219 5.3%	\$391,186 2.2%	3.9%	3.9%
F. Taxes, Licenses & Fees Taxes, Licenses & Fees Percentage = F / A	\$191,055 2.4%	\$151,599 2.4%	\$436,602 2.5%	2.4%	2.4%
G. Other Expense (Income) Other Expense Percentage = G / A	\$46,156 0.6%	\$26,602 0.4%	\$34,329 0.2%	0.4%	0.4%
H. Total Expense ex. Loss Adjustment, Reinsurance and Profit = Sum of C - G	23.9%	30.1%	25.6%	26.5%	26.5%
I. Incurred Loss	\$3,955,397	\$3,158,906	\$9,603,808		
J. Loss Adjustment Expense Loss Adjustment Expense Percentage = J / I	\$693,497 17.5%	\$457,396 14.5%	\$2,036,979 21.2%	17.7%	17.7%
K. Profit (Note 4)					5.0%

**Notes:**

- Source: Homeowners data, 2016 IEEs from Allstate Corp. (SNL P&C Group), Liberty Mutual (SNL P&C Group), and State Farm (SNL P&C Group). Companies selected based on the NAIC 2016 Market Share report [http://www.naic.org/prod\\_serv/MSR-PB-17.pdf](http://www.naic.org/prod_serv/MSR-PB-17.pdf) (p.143)
- Selections of C, D, E, F, G and J are based on the straight average of Columns (1) to (3)
- All dollar amounts in thousands.
- Profit Provision based on State Farm Remaining Profit and Contingencies load within latest approved SC filing (SFMA-130871878) and LA filing (SFMA-130873917)



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**Reinsurance**

Flood and Hurricane Wind

(1) State	(2) Filing Company	(3) SERFF/I-File Tracking Number	(4) Cost of Reinsurance
FL	Castle Key Insurance Company	17-03047	13.50%
FL	State Farm Florida Insurance Company	16-20125	8.10%
FL Average			10.80%
LA	Encompass Property and Casualty Company	ALSE-130860309	8.10%
LA	State Farm Fire and Casualty Company	SFMA-130873917	9.50%
LA Average			8.80%
SC	State Farm Fire and Casualty Company	SFMA-130871878	5.06%
SC	Allied Property and Casualty Insurance Company	NWPC-130945178	3.20%
SC Average			4.13%
TX	State Farm Lloyds	SFMA-131085699	3.70%
TX	United Services Automobile Association	USAA-130998576	4.20%
TX Average			3.95%

Earthquake

(1) State	(2) Filing Company	(3) SERFF/I-File Tracking Number	(4) Annual Expected Loss	(5) Cost of Reinsurance Net of Recoveries and Fees	(6) AAL Load
CA	California Earthquake Authority	CAEQ-131351558	\$352,862,000	\$223,767,000	1.634
CA	Geovera Insurance Company	07-1737 (Note 4)	28,209,956	61,664,058	3.186

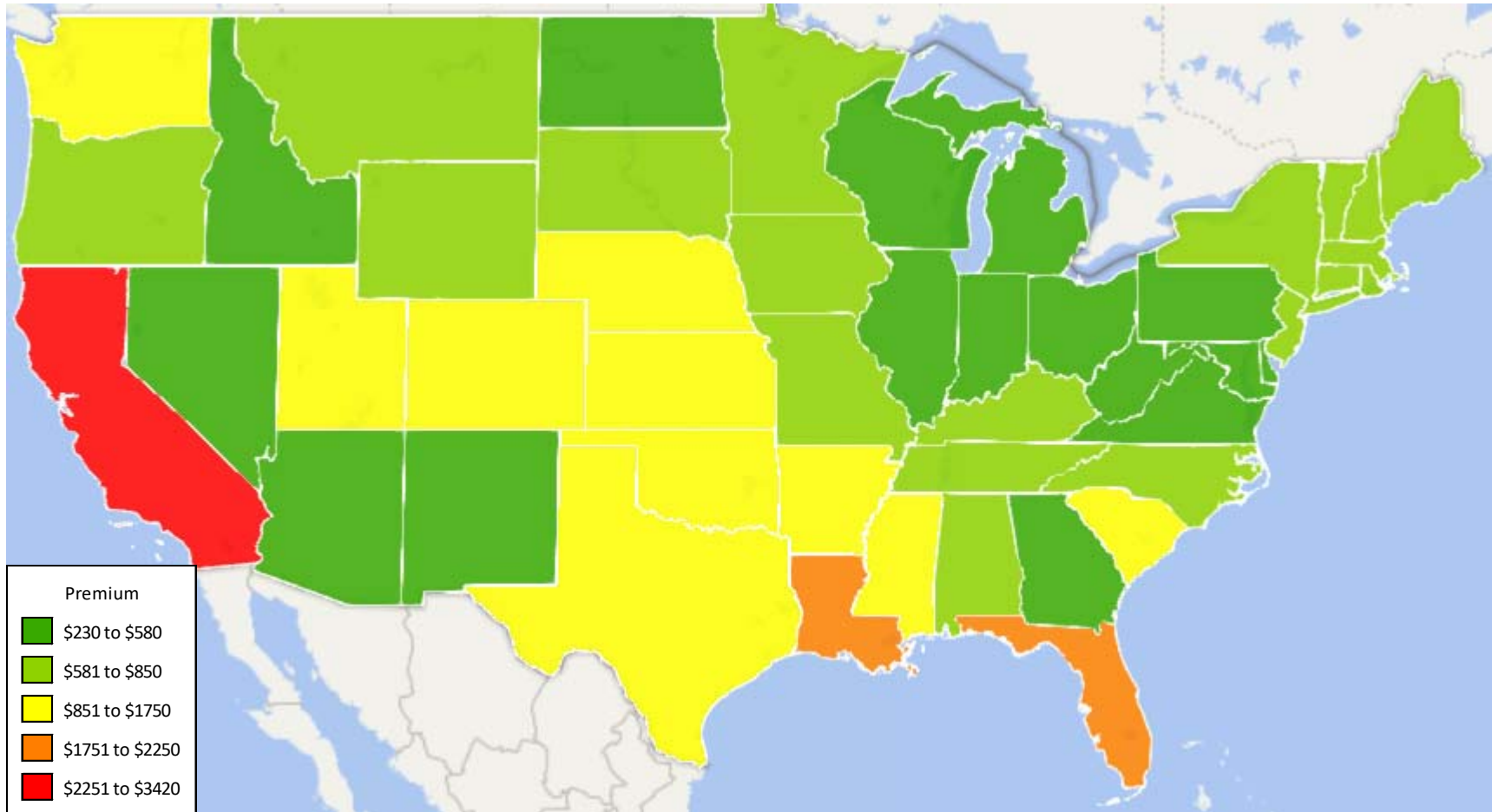
Hurricane Wind and Flood

Premium Scenario	Hurricane Wind and Flood Cost of Reinsurance	Earthquake AAL Load
High (Note 1)	9.8%	3.186
Medium (Note 2)	6.9%	2.410
Low (Note 3)	4.0%	1.634

Notes:

1. Cost of High Reinsurance based on average of FL and LA state averages. AAL Load based on Geovera Insurance Company Load.
2. Cost of Medium Reinsurance based on average of all listed state averages. AAL Load based on average of High and Low scenarios.
3. Cost of Low Reinsurance based on average of TX and SC state averages. AAL Load based on California Earthquake Authority Load.
4. No SERFF number available. CA tracking number listed.

**All Catastrophe Perils Estimated Average Premium - Medium Reinsurance**

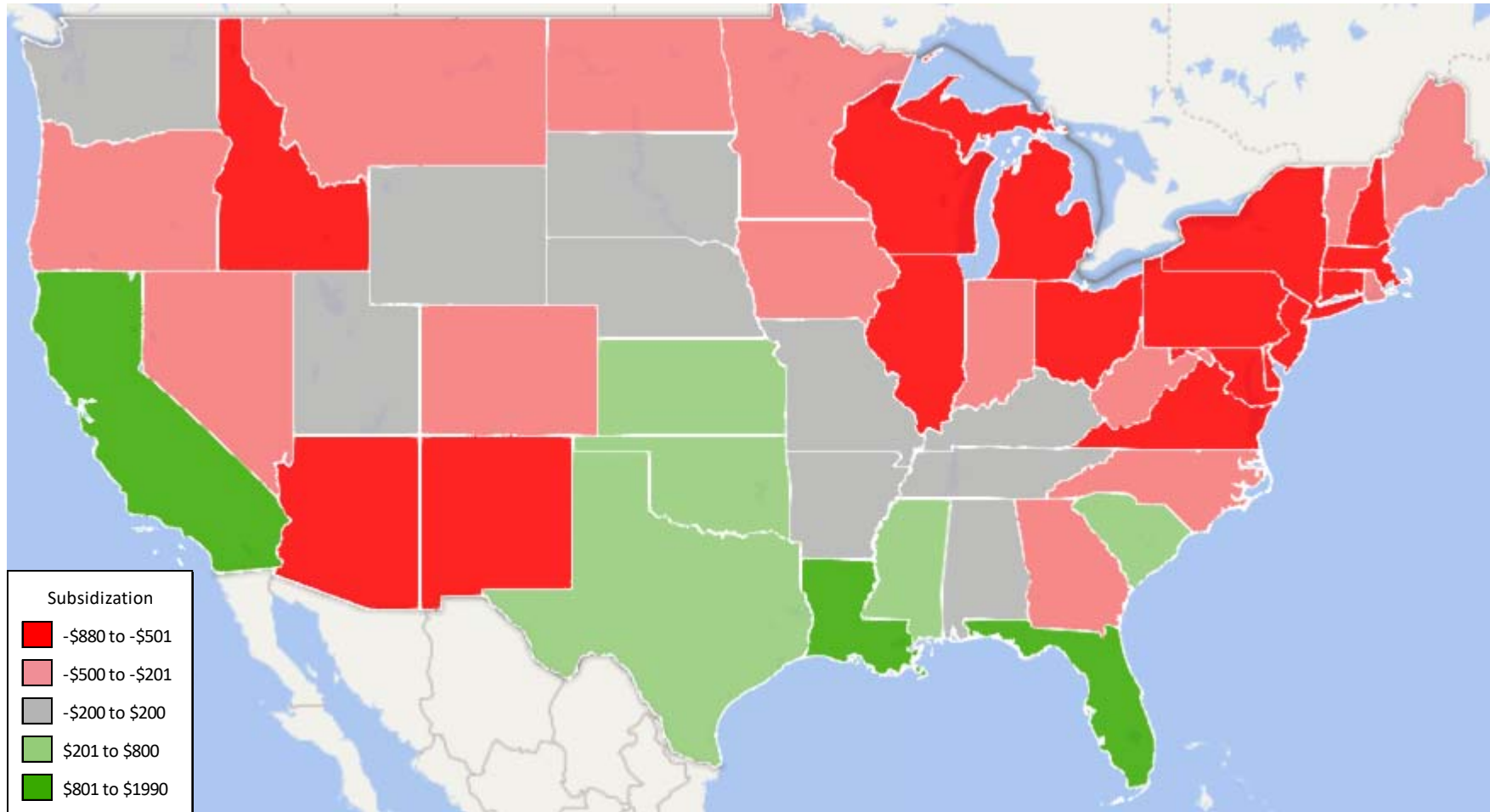


Green = Lowest average premium

Yellow = Medium average premium

Red = Highest average premium

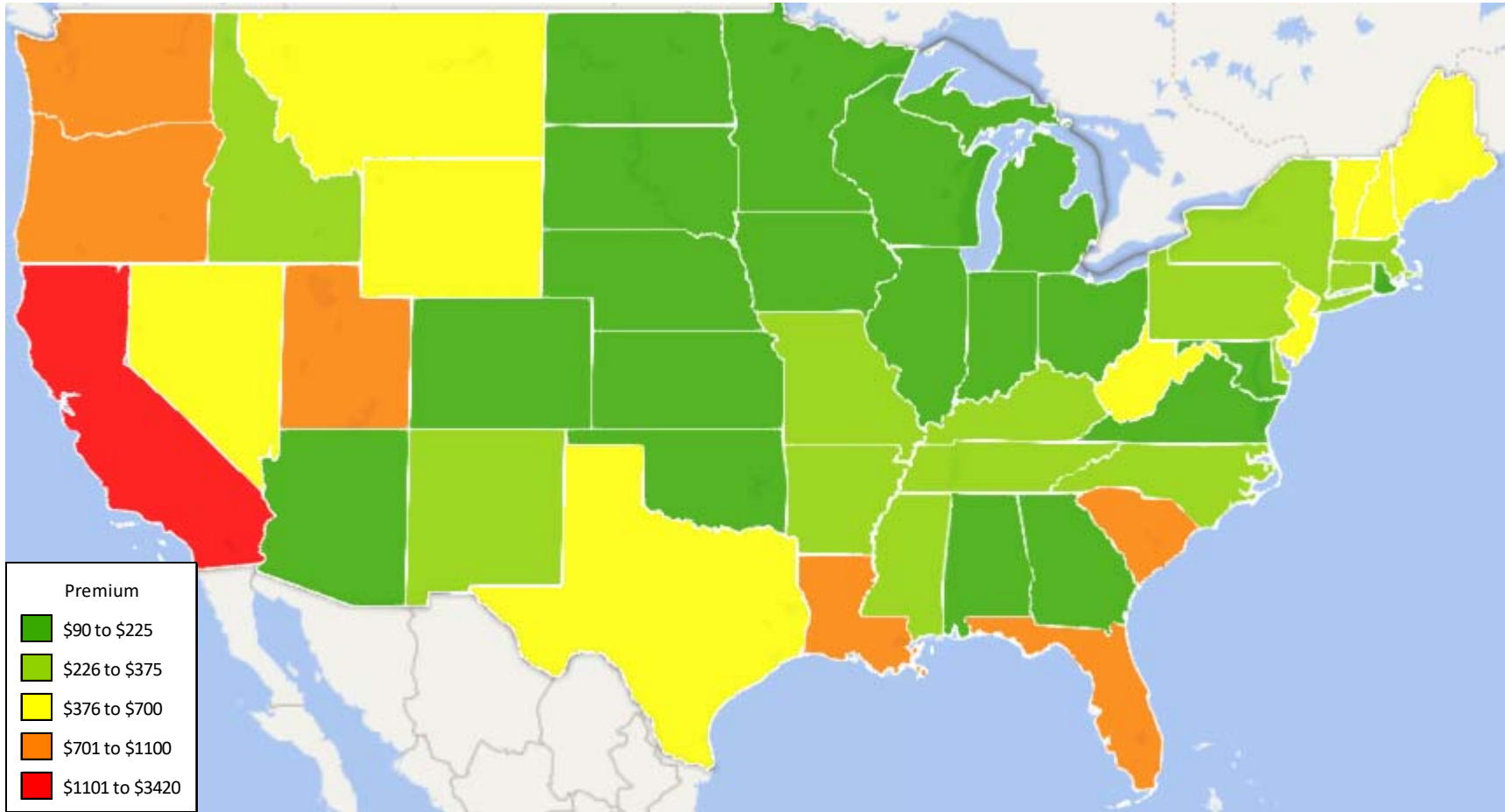
**All Catastrophe Perils Average Premium Subsidy - Medium Reinsurance**



Red = Subsidies paid to other states

Green = Subsidies received from other states

**Earthquake + Total Flood Estimated Average Premium - Medium Reinsurance**

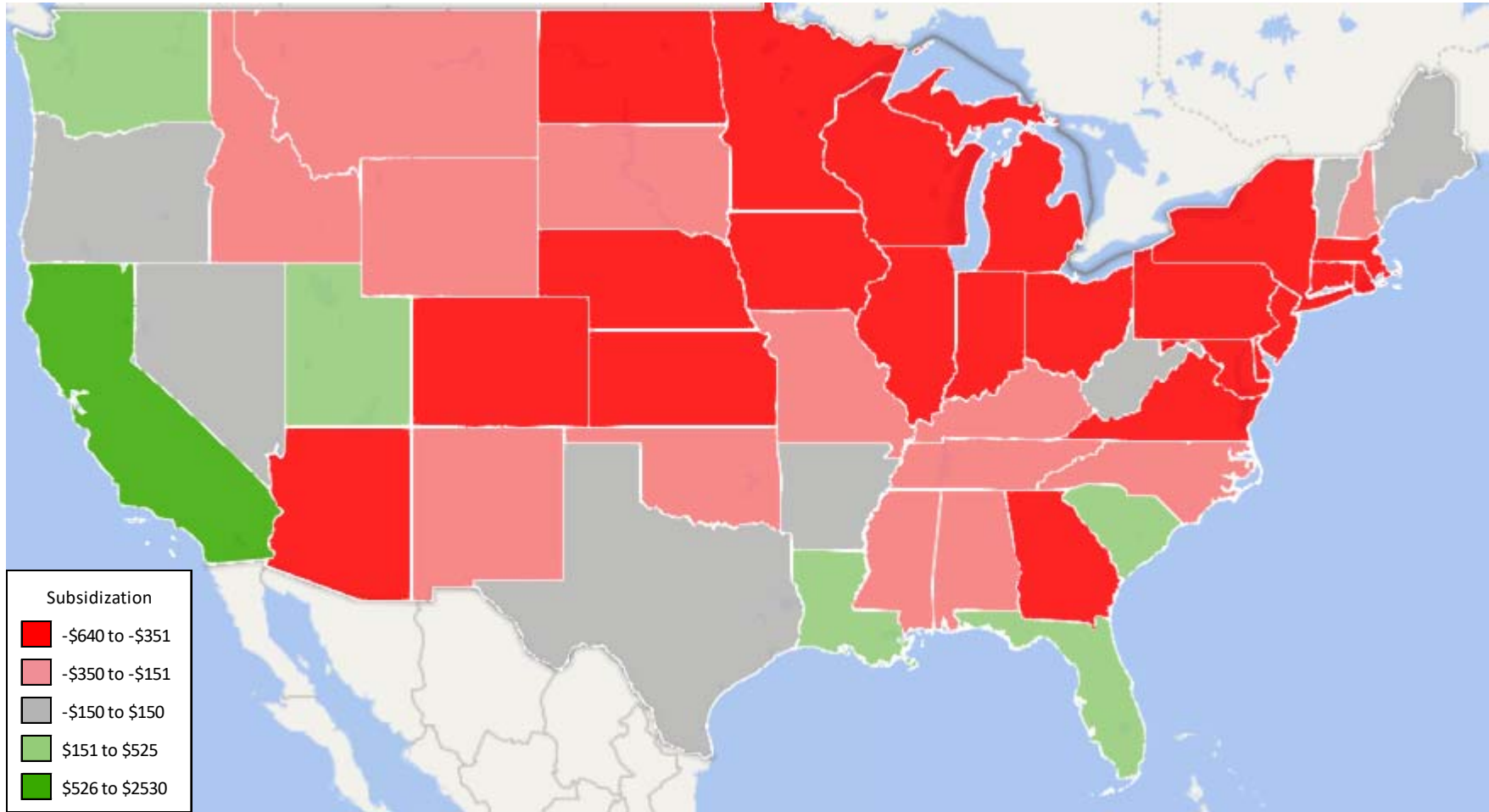


Green = Lowest average premium

Yellow = Medium average premium

Red = Highest average premium

**Earthquake + Total Flood Average Premium Subsidy - Medium Reinsurance**

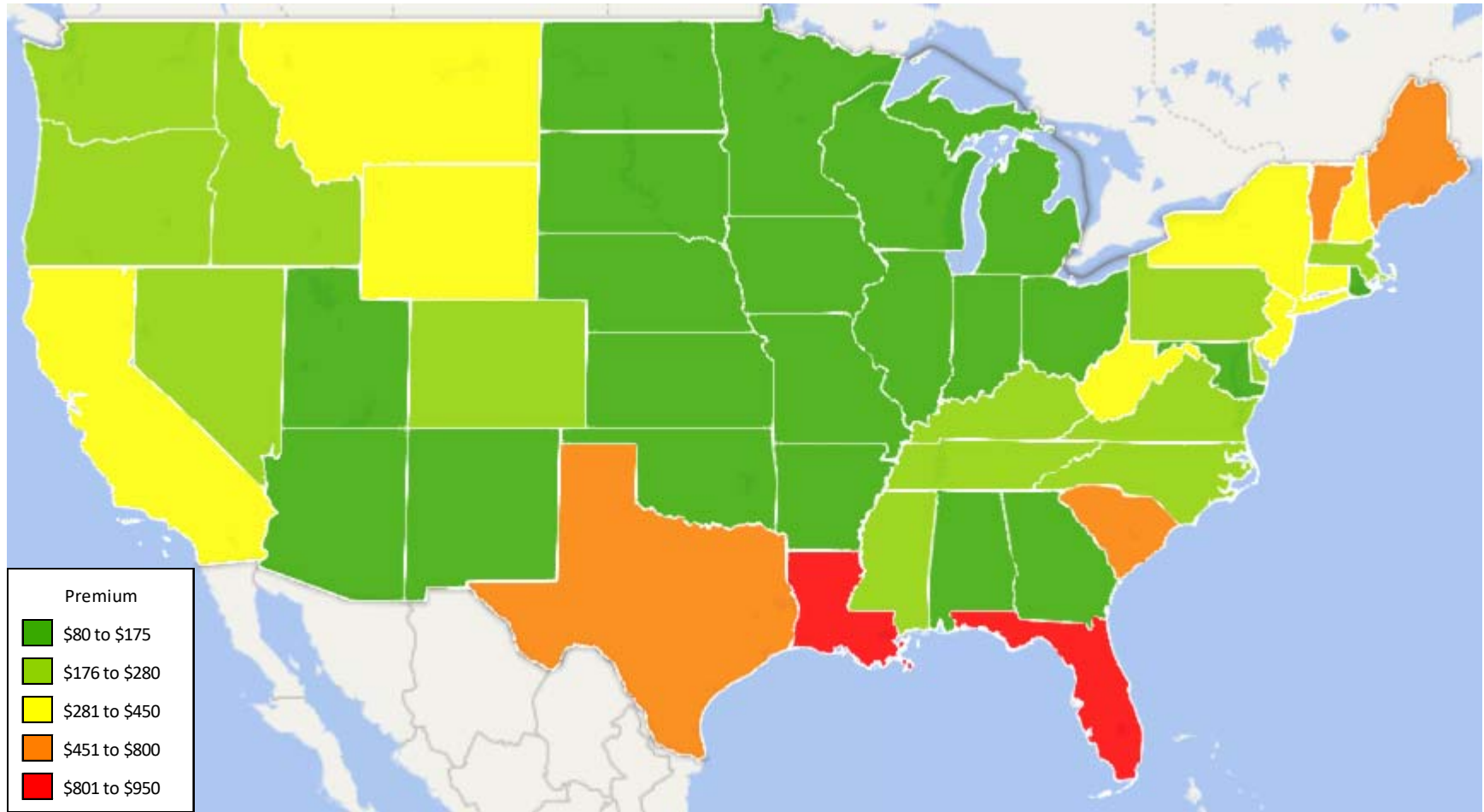


Red = Subsidies paid to other states

Green = Subsidies received from other states



**Total Flood Estimated Average Premium - Medium Reinsurance**



Premium

Green	\$80 to \$175
Light Green	\$176 to \$280
Yellow	\$281 to \$450
Orange	\$451 to \$800
Red	\$801 to \$950

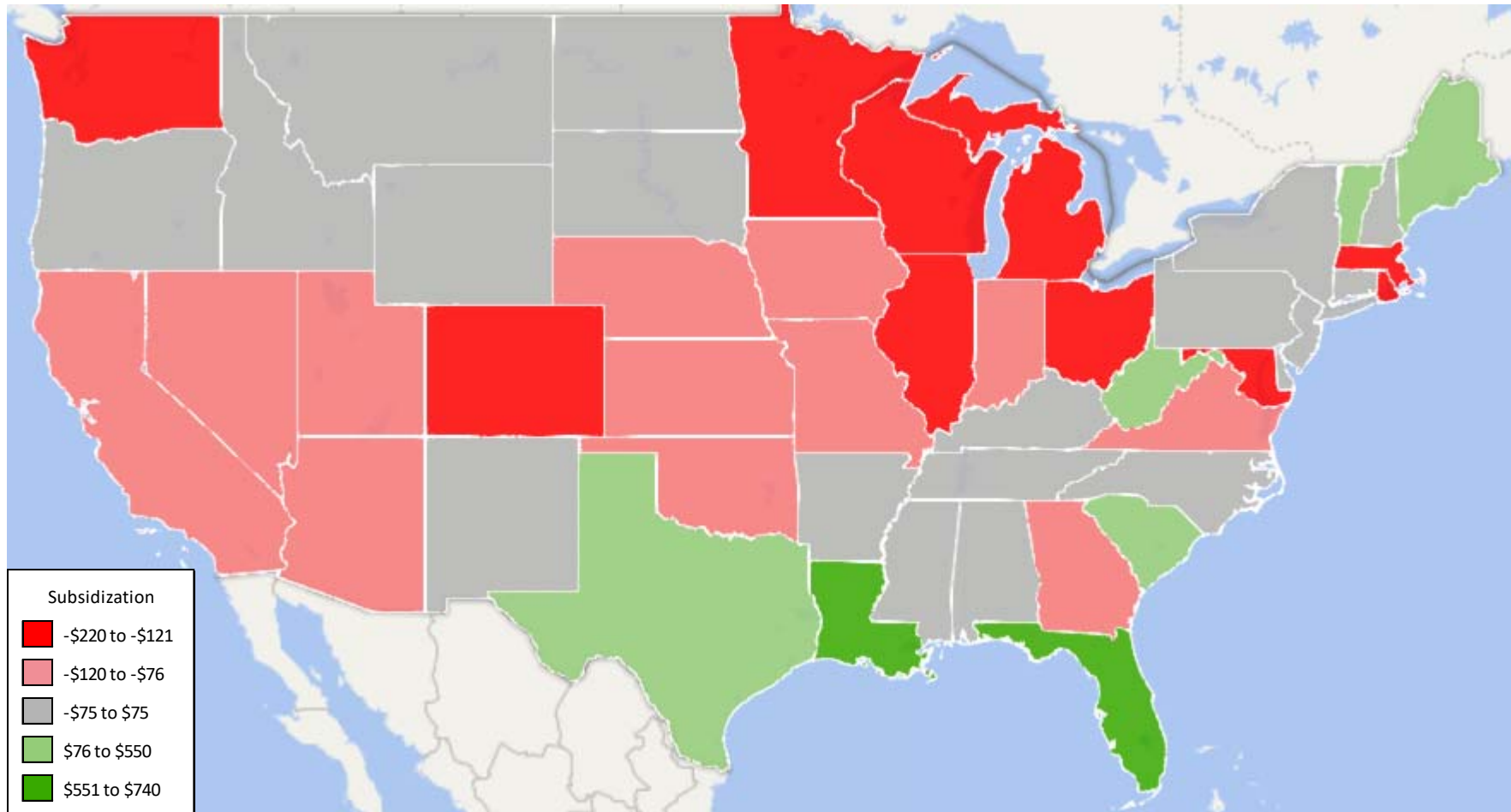
**Green = Lowest average premium**

**Yellow = Medium average premium**

**Red = Highest average premium**



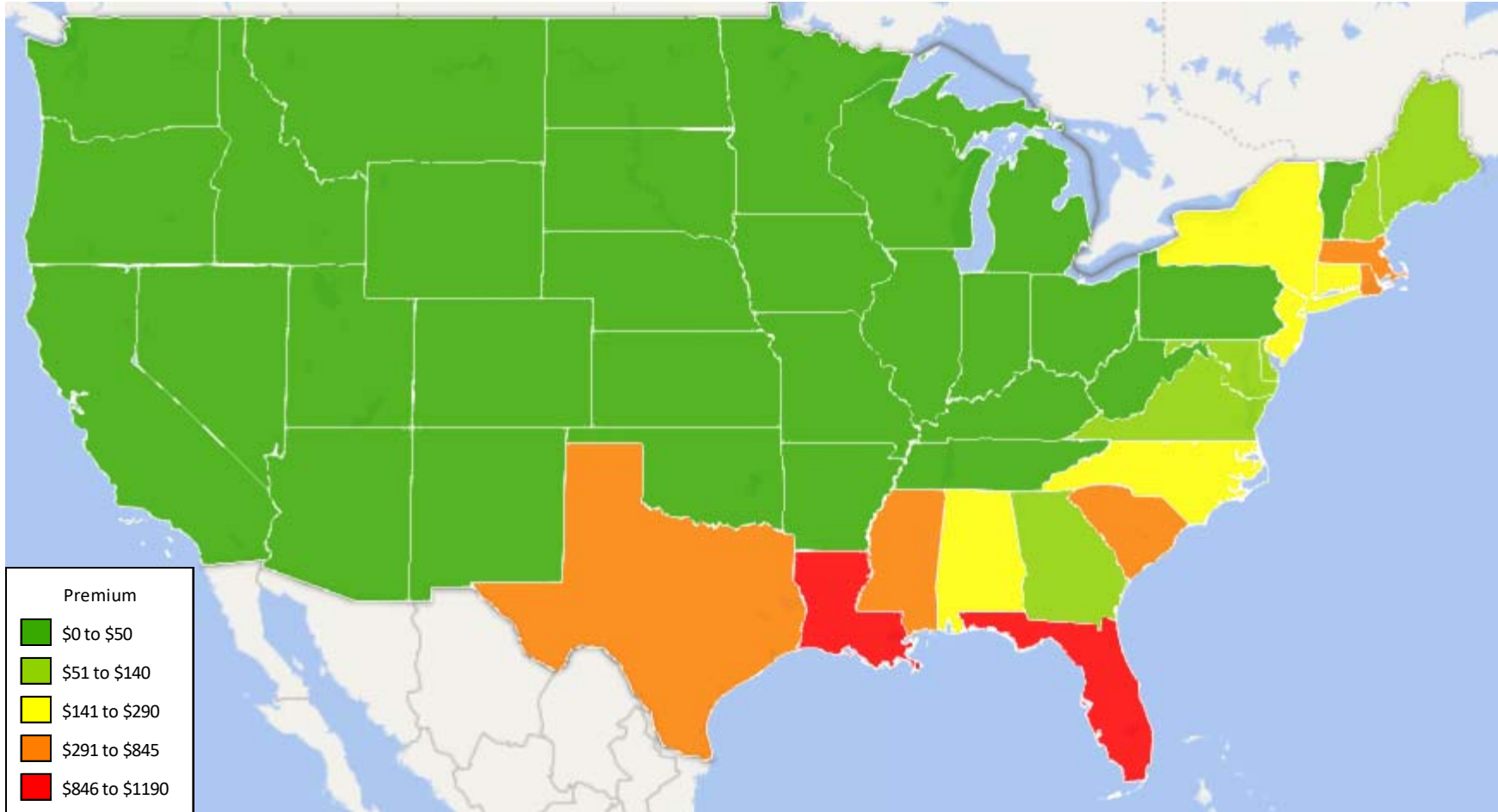
**Total Flood Average Premium Subsidy - Medium Reinsurance**



Red = Subsidies paid to other states

Green = Subsidies received from other states

**Hurricane Wind Estimated Average Premium - Medium Reinsurance**



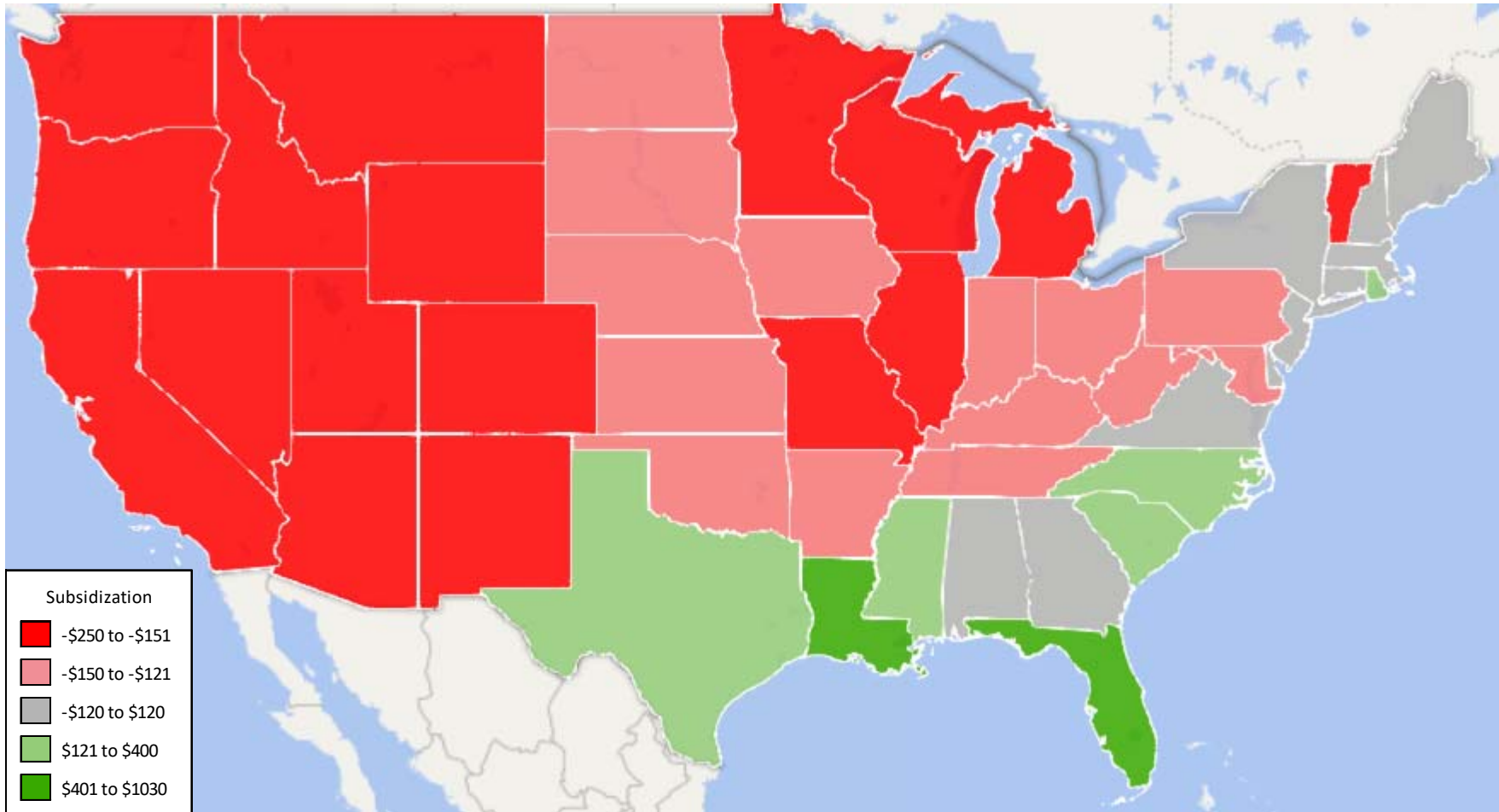
Premium	
Green	\$0 to \$50
Light Green	\$51 to \$140
Yellow	\$141 to \$290
Orange	\$291 to \$845
Red	\$846 to \$1190

**Green = Lowest average premium**

**Yellow = Medium average premium**

**Red = Highest average premium**

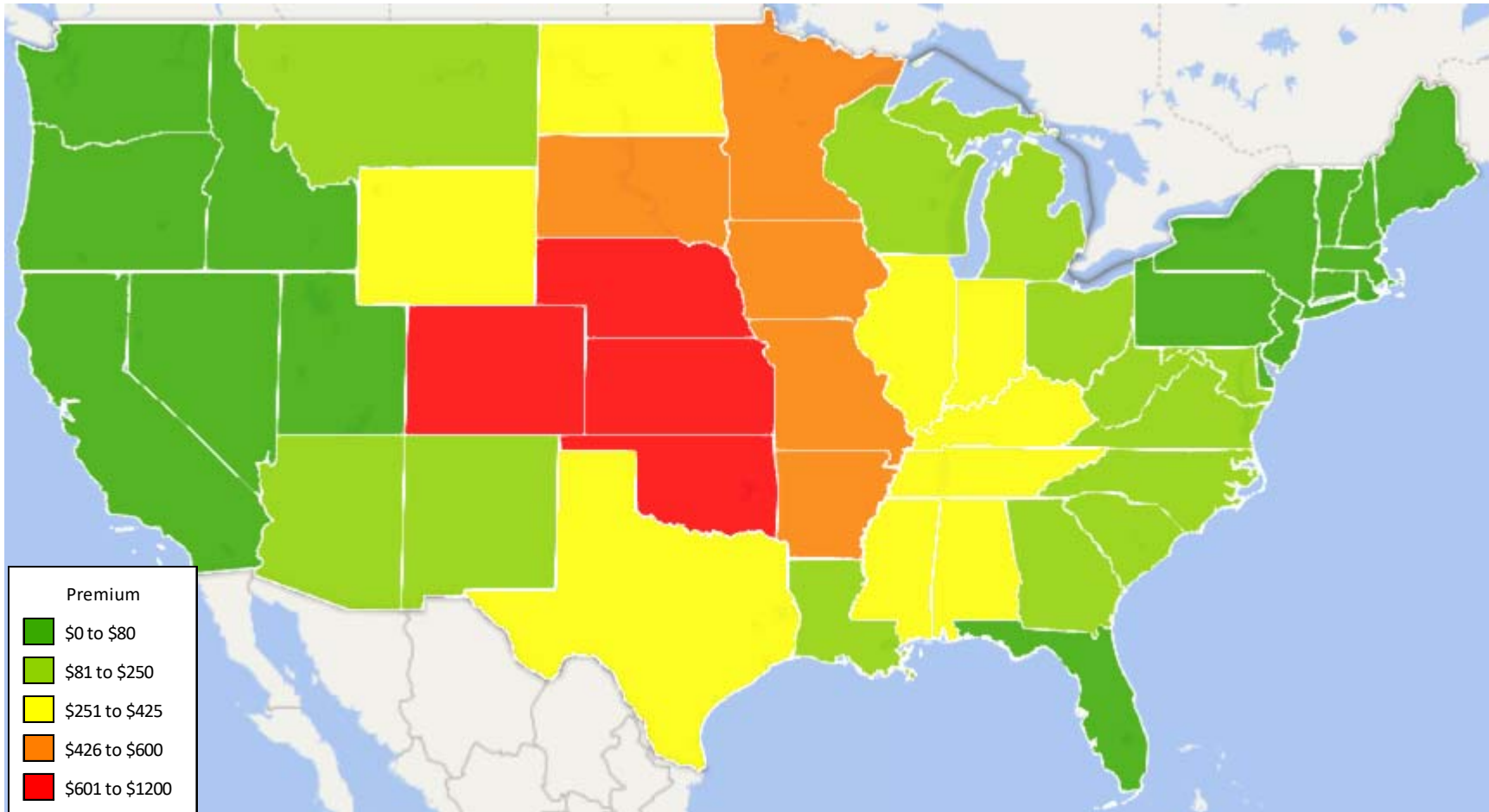
**Hurricane Wind Average Premium Subsidy - Medium Reinsurance**



Red = Subsidies paid to other states

Green = Subsidies received from other states

**Severe Convective Storm Estimated Average Premium - Medium Reinsurance**

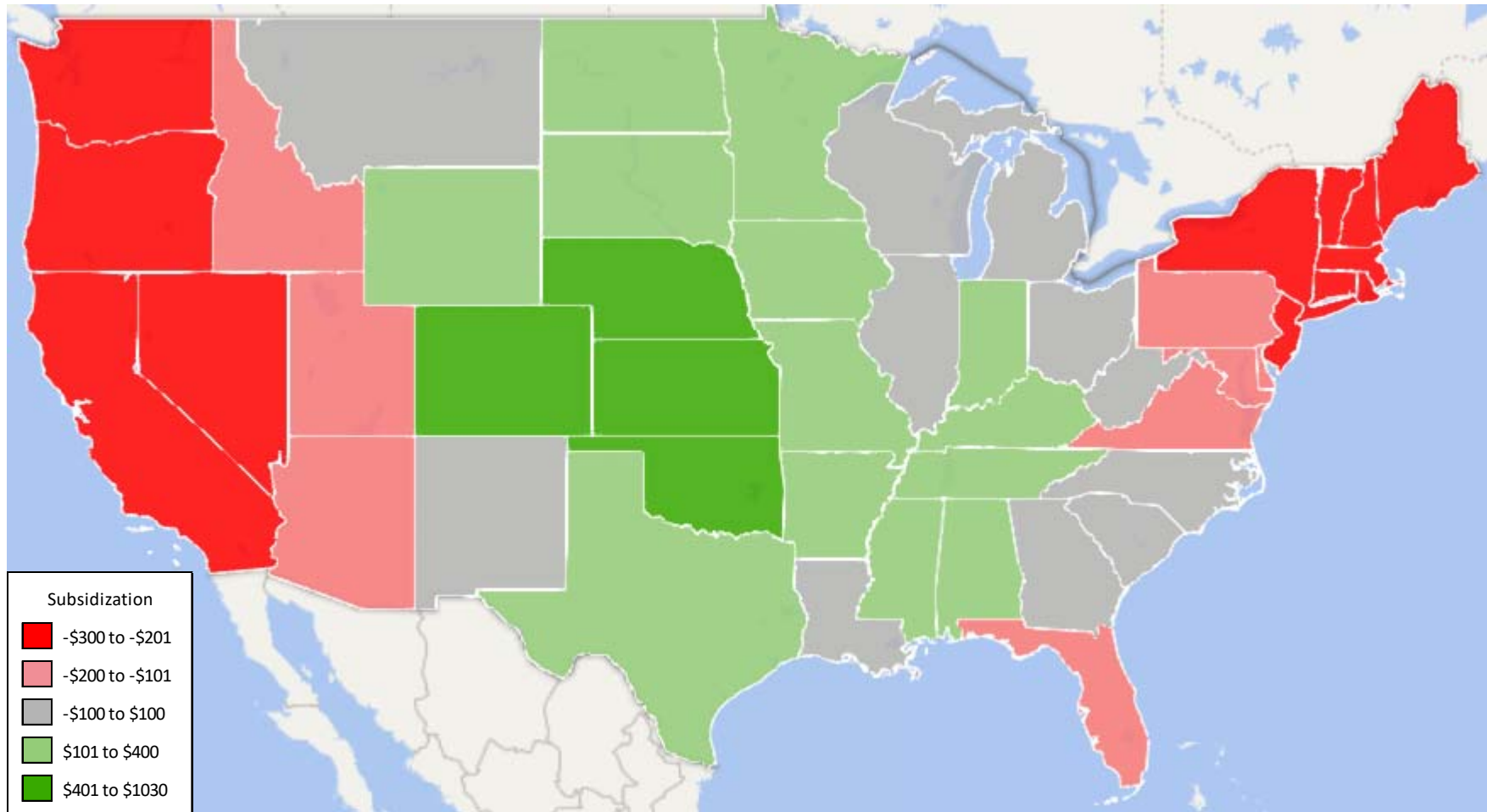


**Green = Lowest average premium**

**Yellow = Medium average premium**

**Red = Highest average premium**

**Severe Convective Storm Average Premium Subsidy - Medium Reinsurance**

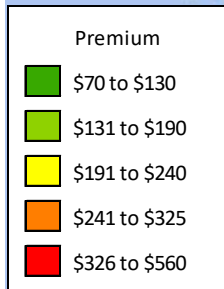
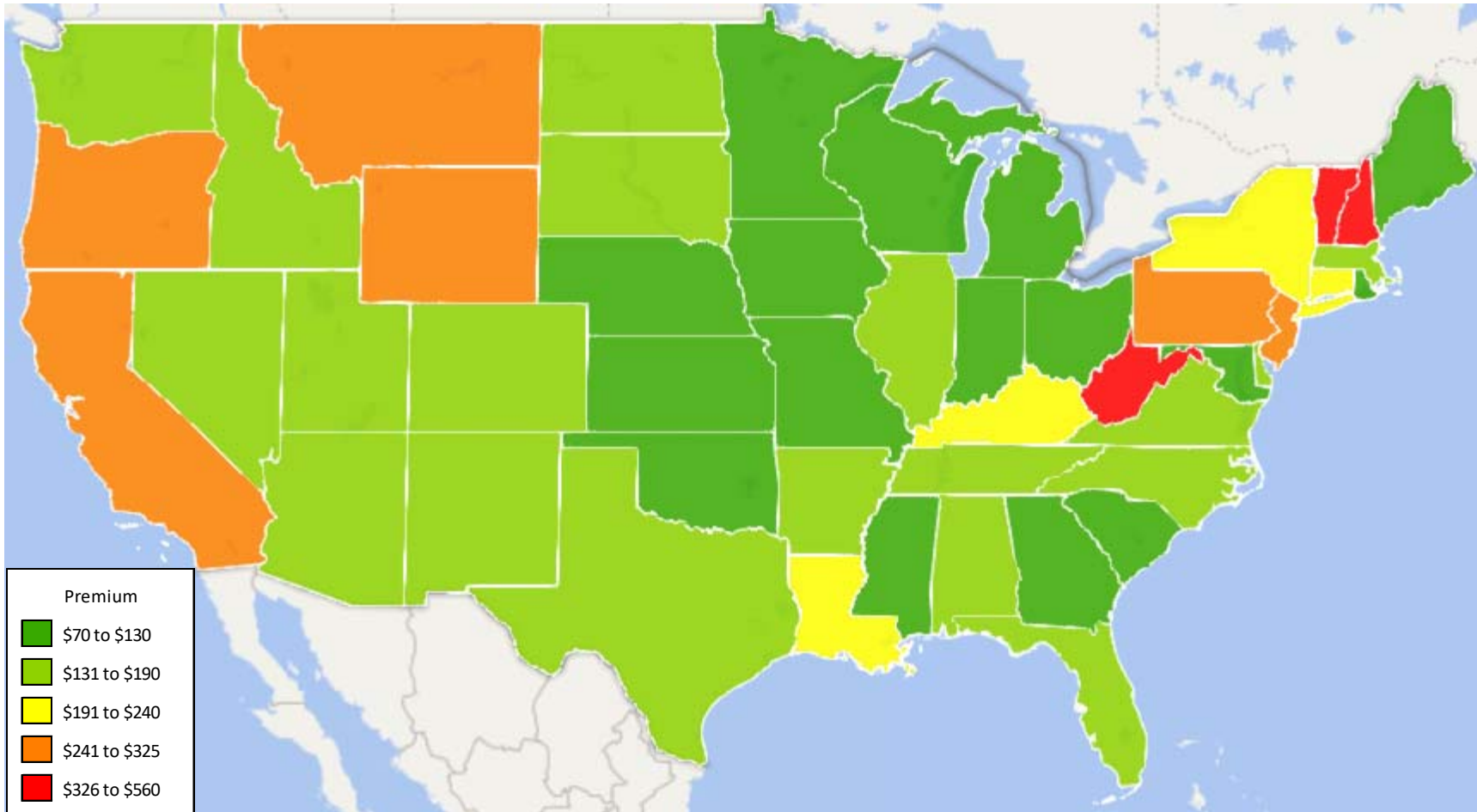


Red = Subsidies paid to other states

Green = Subsidies received from other states



**Inland Flood Estimated Average Premium - Medium Reinsurance**



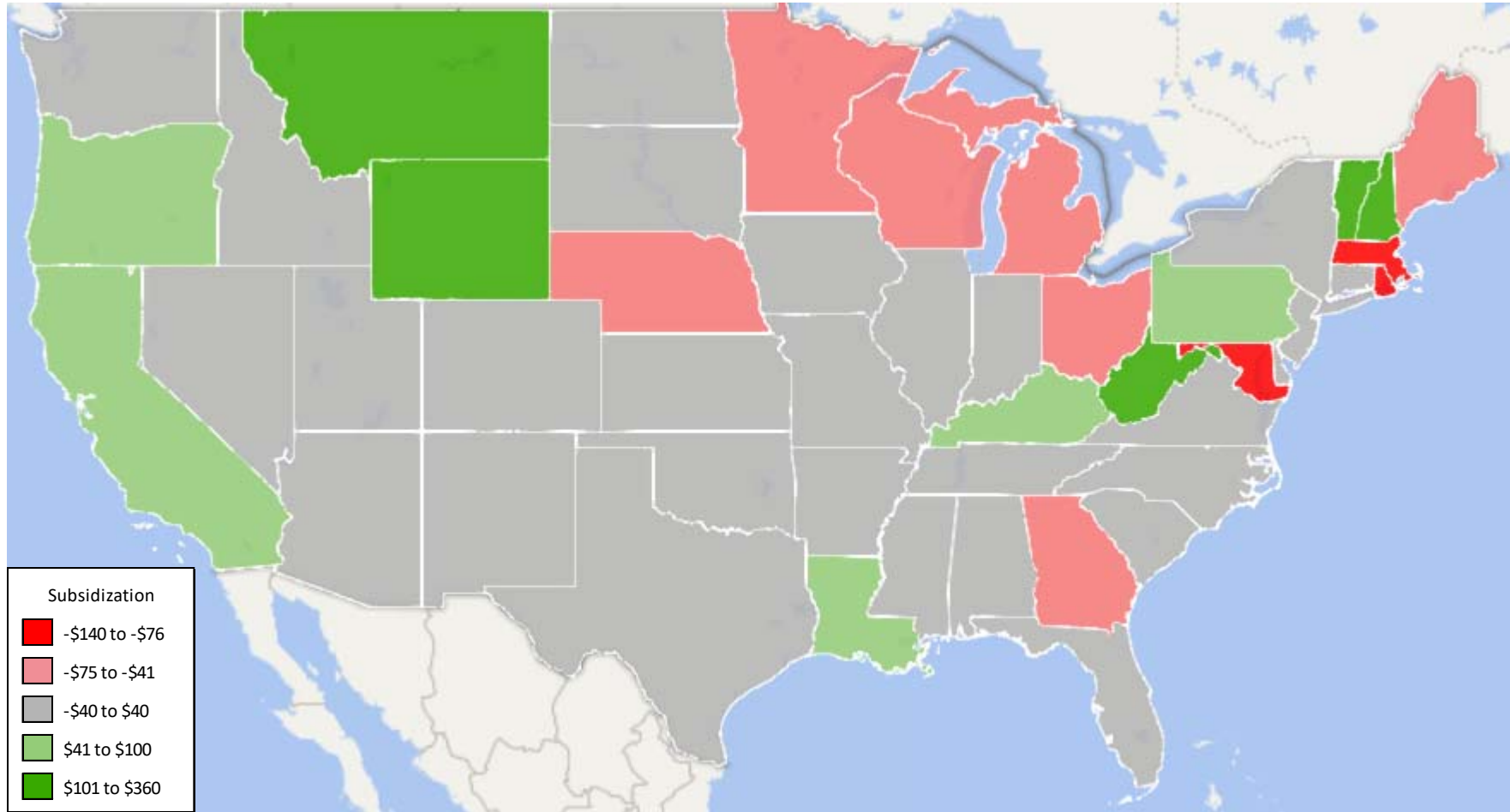
Green = Lowest average premium

Yellow = Medium average premium

Red = Highest average premium



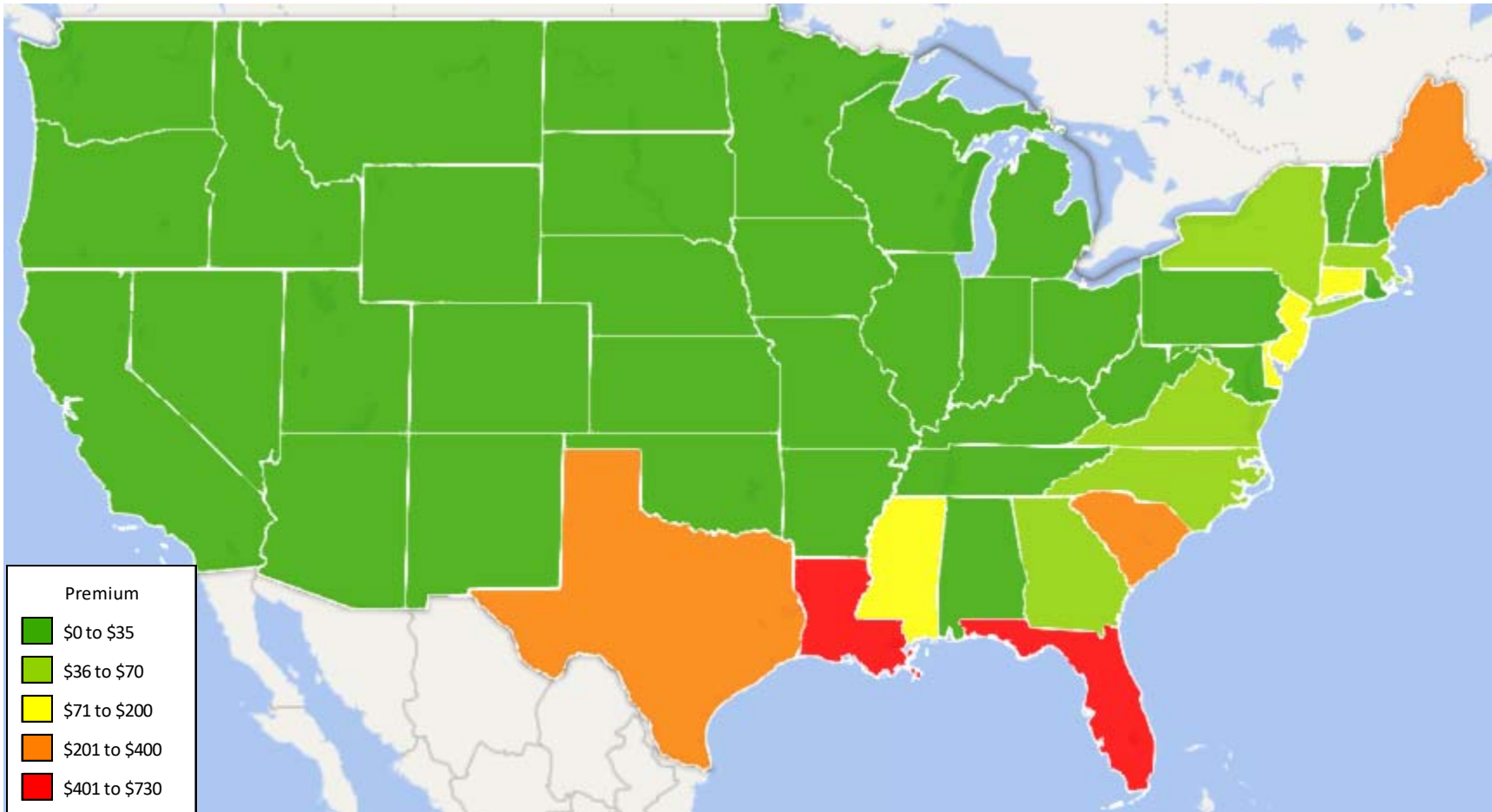
**Inland Flood Average Premium Subsidy - Medium Reinsurance**



Red = Subsidies paid to other states

Green = Subsidies received from other states

**Storm Surge Estimated Average Premium - Medium Reinsurance**

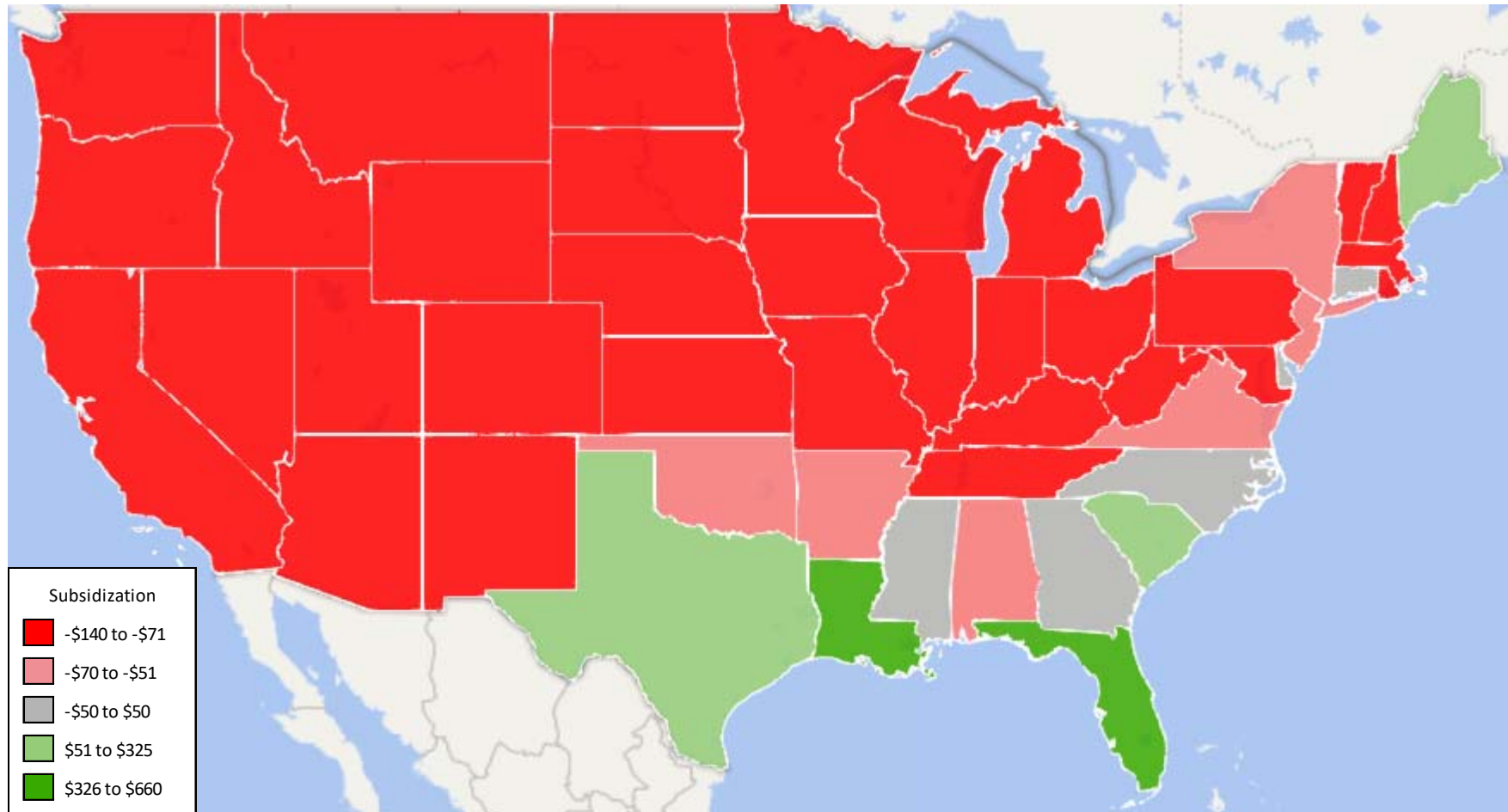


Green = Lowest average premium

Yellow = Medium average premium

Red = Highest average premium

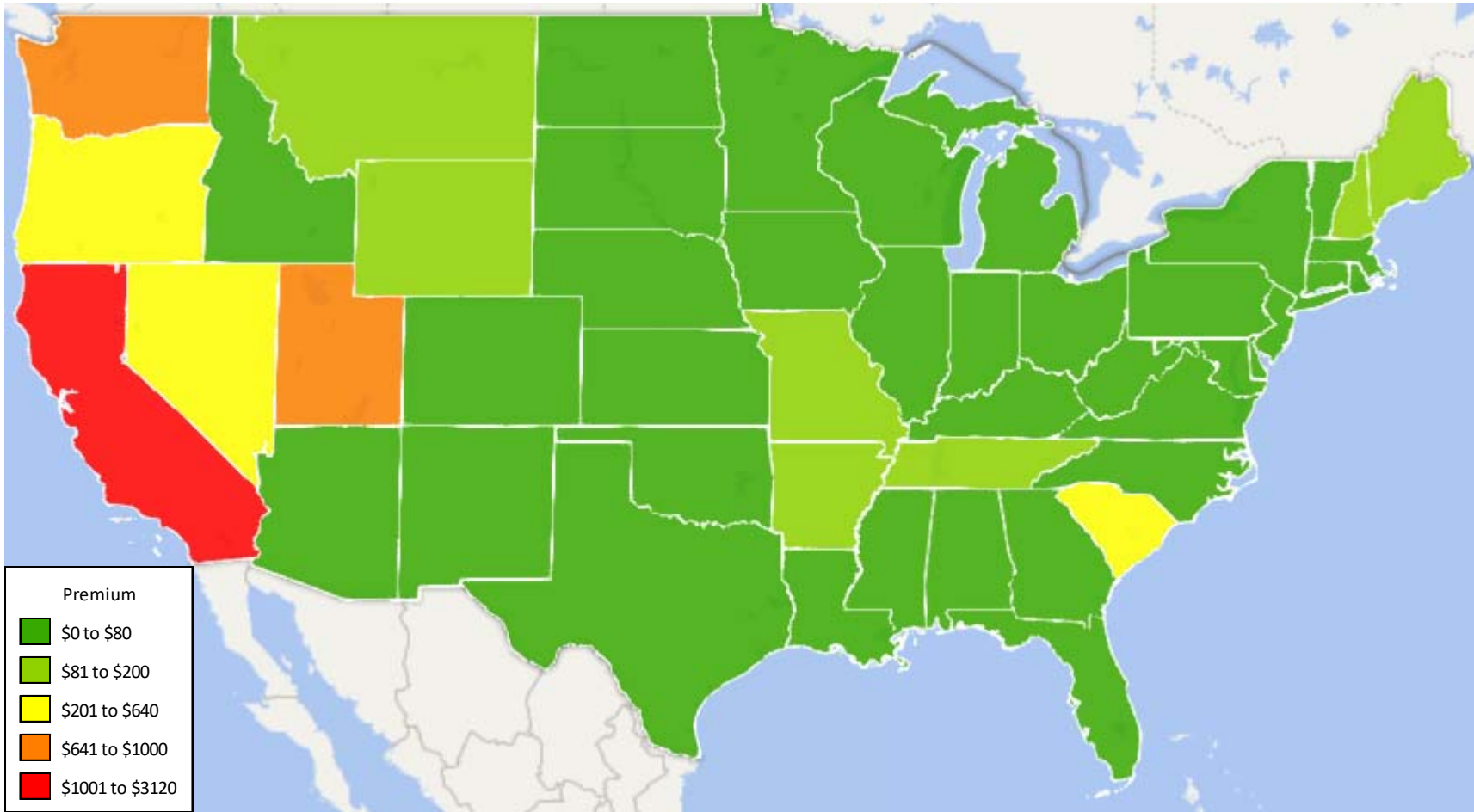
**Storm Surge Average Premium Subsidy - Medium Reinsurance**



Red = Subsidies paid to other states

Green = Subsidies received from other states

**Earthquake Estimated Average Premium - Medium Reinsurance**



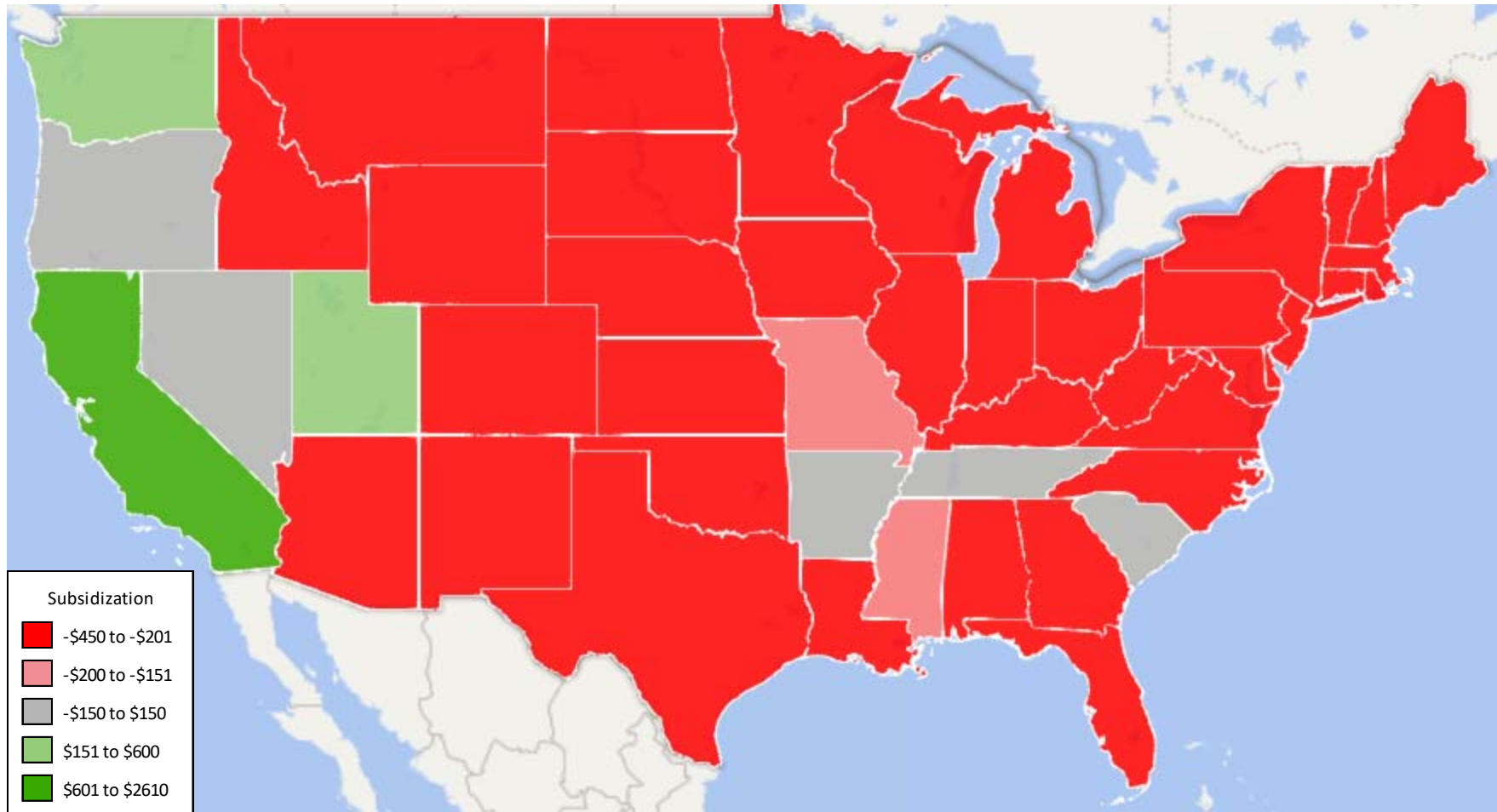
Premium	
Green	\$0 to \$80
Light Green	\$81 to \$200
Yellow	\$201 to \$640
Orange	\$641 to \$1000
Red	\$1001 to \$3120

**Green = Lowest average premium**

**Yellow = Medium average premium**

**Red = Highest average premium**

**Earthquake Average Premium Subsidy - Medium Reinsurance**



Red = Subsidies paid to other states

Green = Subsidies received from other states