

November 15, 2021

Mr. Steven E. Seitz,  
Director, Federal Insurance Office  
Att., Elizabeth Brown

**Subject: Response to FIO request for information**

Insurers are no strangers to climate and extreme-weather risk.<sup>1</sup> We may not always have talked about the issue in those terms, but our industry has had a financial stake in it for decades. Consider the following:

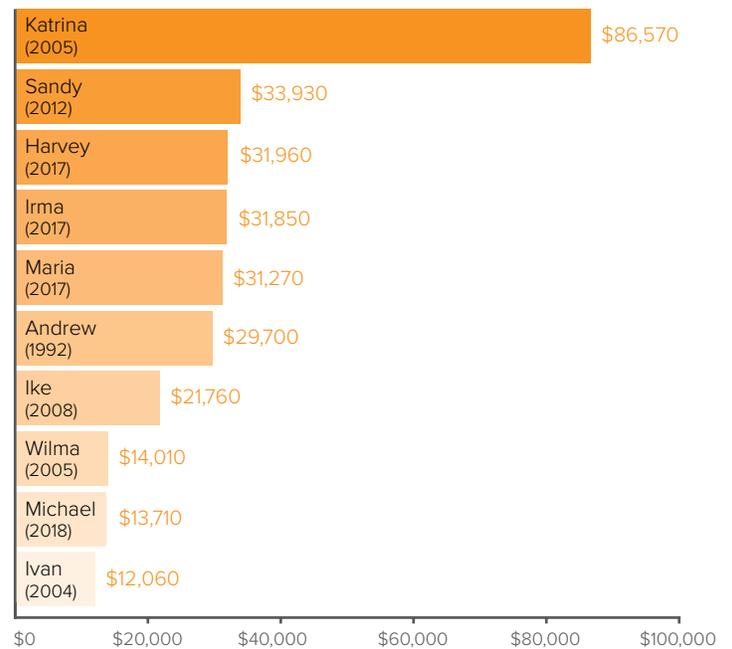
- Insured losses caused by natural disasters have grown by nearly 700 percent since the 1980s;
- Four of the five costliest natural disasters in U.S. history have occurred over the past decade<sup>2</sup>;
- U.S. insurers paid out \$67 billion in 2020 due to natural disasters. The insured losses emerged in part as the result of 13 hurricanes<sup>3</sup>, five of the six largest wildfires in California’s history<sup>4</sup>, and a derecho that caused significant damage in Iowa.<sup>5</sup>
- This year’s Hurricane Ida is expected to cost insurers at least \$31 billion.<sup>6</sup>
- From January 1 to October 19, 2021 there were 47,525 wildfires, compared with 46,148 in the same period in 2020, according to the National Interagency Fire Center.<sup>7</sup> In 2020 there were 58,950 wildfires, compared with 50,477 in 2019. About 10.1 million acres were burned in 2020, compared with 4.7 million acres in 2019.

To the extent that data-gathering and modeling technologies allowed, weather and climate trends have been considered in pricing and reserving methodologies. As information storage and processing capabilities have improved, the industry has not only gotten better at underwriting and reserving for these risks – it has identified opportunities in areas it once could only view as problems. Improved modeling, for example, has increased insurers’ comfort with and appetite for writing flood coverage and spurred development of new products.<sup>8</sup>

A gradual but critical change has been a shift away from merely verifying and quantifying damages and paying claims and toward getting in front of risks, educating policyholders, and partnering with businesses and communities to mitigate these hazards in advance. Insurers are and always will be financial first

## 10 Costliest U.S. Hurricanes

(\$ millions, in 2020 dollars)



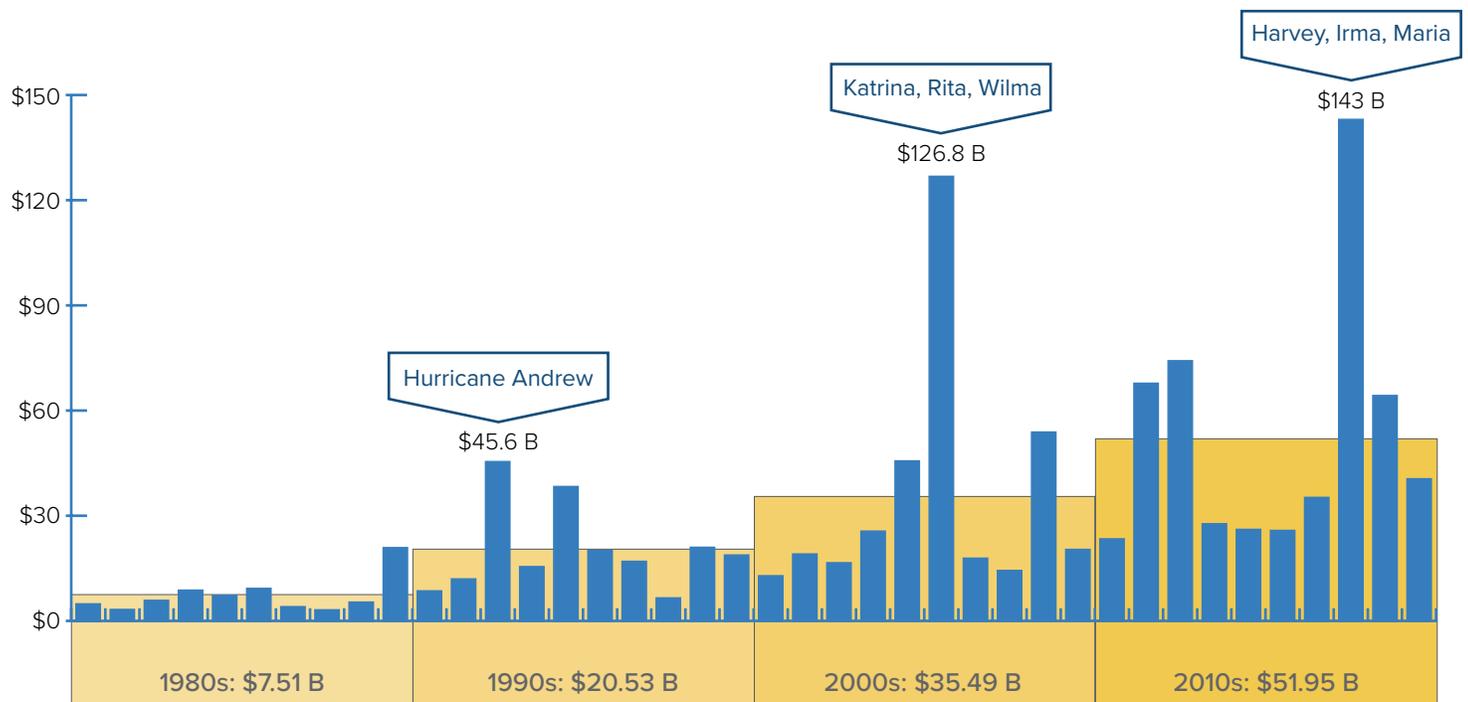
Includes Puerto Rico and the U.S. Virgin Islands and losses sustained by private insurers and government-sponsored programs such as the National Flood Insurance Program. Includes hurricanes that occurred through 2020. Subject to change as loss estimates are further developed. As of February, 2021. Ranked on insured losses in 2020 dollars. Adjusted for inflation by Aon using the U.S. Consumer Price Index.

responders – supporting prudent risk taking that spurs economic activity – but there’s a growing realization that risk transfer alone isn’t enough.

As part of its research and education mission, the Insurance Information Institute (Triple-I) provides data-driven insights that inform industry discussions on climate risk to help consumers, policymakers, and other key audiences appreciate the role of insurance and understand how individual, community-development, and public-policy behaviors need to change. Insurance is one important step toward resilience. It is well documented that better-insured communities recover faster from disasters, but more is required to address increasingly complex global risks.

## Average insured cat losses up nearly 700% since 1980s\*

(U.S. Inflation-Adjusted Losses, \$ Billions, 2021)



\*Includes insured losses from all natural perils.

Source: Aon (Catastrophe Insight)

## Historical perspective

Hurricane Andrew<sup>9</sup> in 1992 and Northridge earthquake<sup>10</sup> in 1994 were the industry's call to action to mitigate the severity of natural catastrophes as increasing numbers of people moved into disaster prone areas, driving up the cost of events. Changes have included strengthened building codes; broad reliance on catastrophe models for pricing, underwriting, and capital allocation; and growth in risk-transfer tools like reinsurance markets and catastrophe bonds.

Even with such changes, however, the costs associated with hurricanes<sup>11</sup>, floods<sup>12</sup>, severe convective storms<sup>13</sup>, and wild fires<sup>14</sup> continue to rise for reasons that increasingly correlate with changing weather patterns related to climate.

As of September 30, 2021, there were 20 named storms during the Atlantic hurricane season. There were seven hurricanes—Elsa, Grace, Henri, Ida, Larry, Nicholas, and Sam. Insured losses from Ida alone are forecast to reach between \$31 billion and \$44 billion, according to catastrophe-modeling firm RMS.<sup>15</sup>

Eight of the 10 costliest wildfires in U.S. history have occurred since 2017 – three of them in 2020, according to Aon.<sup>16</sup> The combination of shifting populations with hotter, dryer summer weather indicates that – without dramatic pre-emptive mitigation – these costs will only tend to increase.

February 2021's winter storm<sup>17</sup>, which left dozens of Texans dead, millions without power, and nearly 15 million with water issues, could wind up being the costliest disaster in the state's history. Disaster-modeling firm AIR Worldwide says claims volume will likely be significant and, with average claims severity values of \$15,000 for residential risks and \$30,000 for commercial risks, insured losses "appear likely to exceed \$10 billion."<sup>18</sup>

Anomalous as the Texas winter storm may have been, it is a salient data point that all states and municipalities should take to heart in their disaster planning. FEMA has proposed "substantively" revising the "estimated cost of assistance" factor the agency uses to review governors' requests for a federal disaster declaration to "more accurately assess the disaster response capabilities" of the states, District of Columbia and U.S. territories.<sup>19</sup>

In other words, the federal government will likely ask states and municipalities to shoulder more of the cost of recovering from natural catastrophes – making it even more important for every state to prepare for and insure against events that might have seemed unthinkable not so long ago.

## A well-capitalized, engaged industry

Insurers and reinsurers are well capitalized to absorb the short-term impacts of individual events. Policyholder surplus<sup>20</sup> – the financial cushion insurers are required to maintain to protect policyholders in the event of unexpected or catastrophic losses – for the property/casualty insurance industry was \$914 billion at the end of 2020. In addition, most of the industry’s investment portfolio (\$9.7 trillion of assets under management<sup>21</sup>) is in municipal and other highly rated bonds. These stable investments not only help ensure that funds are available to pay claims; they also support a wide range of economic activities and community development.

FEMA’s National Flood Insurance Program (NFIP) provides coverage for flood risk, and other natural catastrophe risks are covered through state-level shared markets, such as the Florida Hurricane Catastrophe Fund, California Earthquake Authority, Louisiana Citizens Property Insurance Corporation, and North Carolina Coastal Property Insurance Pool.

The National Association of Insurance Commissioners’ (NAIC) Risk Management and Own Risk and Solvency Assessment Model Act (ORSA) model<sup>22</sup> – adopted in the wake of the financial crisis that began in 2008 – provides a strong regulatory framework for state regulators to supervise climate-risk and financial solvency. ORSA requires large and medium-size U.S. insurers and insurance groups to regularly perform and report an assessment with state regulators upon request, and with the lead state regulator for each insurance group, whether or not any request is made.

During its summer national meeting this year, the NAIC’s Climate and Resiliency Task Force<sup>23</sup> convened to consider the work of its five workstreams:

- Pre-Disaster Mitigation
- Climate Risk Disclosure
- Solvency
- Innovation
- Technology

In addition, nonprofit organizations financially supported by insurers have been actively engaged<sup>24</sup> in helping to address societal issues, including climate-risk mitigation and resilience:

- **The Institutes**, through its affiliates:
  - Triple-I and the Insurance Research Council (IRC), providing consumer education through their research and data-driven insights, and
  - The Griffith Foundation, which focuses on educating insurance policy makers and regulators.
  - The Climate Resiliency Council<sup>25</sup>, which grew out of the Institutes’ Catastrophe Modeling Operating Standards (CMOS) initiative to identify issues, clarify options, and make recommendations for implementing an open common exposure data standard and assessing model interoperability issues.
- **Insurance Institute for Business and Home Safety** (IBHS), delivering top-tier science and translating it into action around building codes and standards and community resilience;
- **Insurance Institute for Highway Safety** (IIHS) and **Highway Loss Data Institute** (HLDI), which focus on educating consumers, policymakers, and safety professionals on highway and transportation safety; and
- **Society of Insurance Research**, which conducts research and provides educational opportunities for insurance practitioners and whose membership cuts across the insurance and other industries, as well as government, higher education, and trade associations.

The practices of these and many other insurance industry organizations help drive critical discussions and activities in many areas of risk, including those related to weather and climate. Triple-I has been partnering with the federal government (FEMA and NFIP); academia; and the private sector to share data-driven insights through our [Resilience Accelerator](#).

## Recommendations

Despite all these developments and engagement, as weather- and climate-related hazards and demographic trends continue to increase insurers' exposures and drive up the frequency and severity of claims, new approaches – with an emphasis on pre-emptive mitigation and resilience – are needed. FIO and other federal agencies can be of assistance.

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***With respect to questions 1, 2, 7, 8, 9, 10, 11, and 14 in the information request:***

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To “**assess climate-related issues**”, FIO should participate in all federal discussions of climate risk, including the Special Presidential Envoy for Climate’s activities. It also should take advantage of the excellent research being conducted in the insurance and other business sectors, as well as academia, to remain current on issues and activities.

Regarding “**gaps in the supervision and regulation of insurers**” and “**potential for major disruptions of private insurance**”, the NAIC’s ORSA model – as described above – provides a strong regulatory framework for supervision of climate-risk and financial solvency. The U.S. insurance sector is arguably the most heavily regulated industry in the world, and it has a long history of providing stability during periods of difficulty and crisis. This, combined with the industry’s prudent reserving practices, has contributed to its ability to keep promises to policyholders during some of the most challenging economic periods.

Essential to the industry’s financial strength is the ability to price coverage consistently with expected costs. In markets where pricing is constrained – whether by state fiat or due to risk conditions that limit insurers’ underwriting appetite – hurricane and earthquake needs are being met by residual market solutions. Residual market programs make basic coverage more readily available in areas that are highly prone to specific risks. California, Florida, Louisiana, and North Carolina have large residual markets, due, at least in part, to pricing restrictions. Such areas could be vulnerable to disruption after a major event, pushing the cost along to taxpayers.

In addition, a large part of the U.S. housing market is uninsured for flood risk. Given the fact that 90 percent of all U.S. natural

disasters involve flooding – and that flood damage strikes frequently in low- or moderate-risk areas – this is an area of genuine concern, making continued reauthorization of NFIP a high priority.

With respect to **insurance availability and affordability**, expected losses and costs are key – particularly in high-risk areas and among traditionally underserved communities, minorities, and low- and moderate-income individuals, who tend to suffer most when natural disasters strike. As we wrote in our previous RFI response regarding auto insurance, availability, affordability, and fairness are inextricably linked. Any serious effort to address one will need to consider the impact on the others.

The complexity of ensuring that insurance is available and affordable is compounded by aggregation of diverse hazards involved in climate risk. As explained above, adequate reserves and policyholder surplus are essential to the availability of funds to pay claims. To the extent that FIO and other federal agencies can help keep a lid on losses and claims by helping to drive advances in pre-emptive mitigation and resilience, insurers and risk managers will be able to continue doing what they already are doing well.

The federal government can play a constructive role by working with state and local authorities to drive improved resilience in problem areas. This – rather than imposing or encouraging new layers of regulation – would increase insurers’ comfort writing coverage in those locations.



## Recommendations (continued)

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### Questions 3 and 5:

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Companies provide financial projections for consistent stress levels as part of their ORSA and evaluations from rating agencies like S&P and A.M. Best. To understand the insurance sector's "exposures to climate-related financial risk" the Triple-I would highly recommend engaging with the NAIC and the rating agencies that are collecting such data, instead of having the federal government duplicate what is already being done.

Triple-I also recommends that FIO consult with leading modeling firms like RMS, AIR Worldwide, Karen Clark & Co. for their industry estimates for key perils: hurricane, flood, earthquake, tornado/hail, and wildfire. This would be more efficient and effective than soliciting data from all insurance companies and attempting to aggregate to an industry estimate.

## Conclusion

In summary, FIO and other federal agencies can support and strengthen the private insurance market by assisting with strategies to reduce the frequency and severity of climate-related events. This could take the form of active participation in federal and international efforts to reduce or reverse the adverse human influences on climate risk; encouraging states to strengthen and enforce building codes to improve the resilience of personal and commercial structures; and supporting long-term reauthorization and modernization of the NFIP and encouraging growth of the private flood insurance market.

Federal agencies also can play a constructive role by working with private-sector climate modelers to standardize the diverse data outputs. The proprietary nature of existing models currently makes apples-to-apples comparisons difficult and complicates

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### Question 6:

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Regarding the "likely advantages and disadvantages of a verified, open-source, centralized database for climate-related information on the insurance sector" Triple-I recommends that FIO become familiar with the work already being done by the Institutes Climate Resiliency Council (CRC), described above.

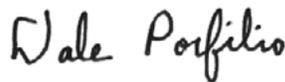
conversations between corporate decision makers and policymakers about physical risks associated with a warmer world and risks associated with making the transition toward a less-carbon-based economy.

Putting the authority and influence of the federal government behind the excellent work already being done by insurers in partnership with their clients, regulators, and state and local jurisdictions could go a long way toward mitigating climate-related risks and improving the resilience of families, communities, and businesses.

The Triple-I appreciates the opportunity to participate in this RFI on behalf of its member companies and would welcome any follow-up discussions with the FIO.



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Chief Executive Officer



Dale Porfilio, FCAS, MAAA  
Chief Insurance Officer



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## Footnotes

- <sup>1</sup> Jeff Dunsavage, "[Climate Risk Is Not A New Priority for Insurers](#)", Triple-I Blog, Insurance Information Institute, April 22, 2021.
- <sup>2</sup> [Facts + Statistics: U.S. catastrophes](#), Insurance Information Institute, as of October 20, 2021.
- <sup>3</sup> [2020 North Atlantic Hurricane Season Shatters Records](#), National Oceanographic and Atmospheric Administration, December 17, 2020
- <sup>4</sup> [Top 20 Largest California Wildfires](#), California Department of Forestry and Fire Protection (CAL FIRE), as of October 6, 2021.
- <sup>5</sup> [Iowa Derecho Claims Top \\$1.6 Billion](#), Iowa Insurance Division, November 9, 2020.
- <sup>6</sup> Leslie Scism, [Ida Storm Damage Expected to Cost Insurers at Least \\$31 Billion](#), The Wall Street Journal,
- <sup>7</sup> Year-to-date statistics, [National Interagency Fire Center](#), as of October 19, 2021.
- <sup>8</sup> Jeff Dunsavage, [Flood: Beyond Risk Transfer](#), The Insurance Information Institute, April 2021.
- <sup>9</sup> [Hurricane Andrew and Insurance: The Enduring Impact of an Historic Storm](#), The Insurance Information Institute, August 2, 2012.
- <sup>10</sup> [Top 10 Costliest U.S. Earthquakes by Inflation-Adjusted Insured Losses](#), The Insurance Information Institute, based on 2021 data from Munich Re, NatCatSERVICE, U.S. Department of Labor, Bureau of Labor Statistics, Insurance Information Institute.
- <sup>11</sup> Jeff Dunsavage, [Hurricane Season: More Than Just Wind and Water](#), The Insurance Information Institute, August 2020
- <sup>12</sup> Jeff Dunsavage, [Flood: Beyond Risk Transfer](#), The Insurance Information Institute, April 29, 2021.
- <sup>13</sup> Jeff Dunsavage, [Severe convective storms: Evolving risks call for innovation to reduce costs, drive resilience](#), The Insurance Information Institute, May 7, 2020.
- <sup>14</sup> [Fighting wildfires with innovation](#), The Insurance Information Institute, November 2019.
- <sup>15</sup> Steve Evans, [RMS Lifts Hurricane Ida Estimate to \\$31bn – \\$44bn, Adds Northern Flood Losses](#), Artemis, September 17, 2021.
- <sup>16</sup> [Facts + Statistics: Wildfires](#), The Insurance Information Institute, as of October 21, 2021.
- <sup>17</sup> Jeff Dunsavage, [Texas Winter Storm Costs Raise Extreme-Weather Flags for States, Localities](#), March 1, 2021.
- <sup>18</sup> Luke Gallin, [AIR Says Winter Storm Uri Industry Loss Likely to Exceed \\$10bn](#), Reinsurance News, February 26, 2021.
- <sup>19</sup> [Federal Register/ Vol. 85, No. 240/ Proposed Rules](#), December 14, 2020.
- <sup>20</sup> [Financial Reporting/Policyholder Surplus](#), The Insurance Information Institute, as of October 21, 2021.
- <sup>21</sup> [A Firm Foundation: How Insurance Supports the Economy/Insurance Industry at a Glance](#), The Insurance Information Institute, as of October 21, 2021.
- <sup>22</sup> [Own Risk and Solvency Assessment \(ORSA\)](#), National Association of Insurance Commissioners (NAIC) website, as updated on April 9, 2021.
- <sup>23</sup> [Climate and Resiliency \(EX\) Task Force](#), NAIC website, as of October 21, 2021.
- <sup>24</sup> Jeff Dunsavage, [Triple-I CEO: Insurance Leading on Climate Risk](#), The Insurance Information Institute, June 3, 2021.
- <sup>25</sup> [Affiliates and Brands/Catastrophe Resiliency Council](#), The Institutes website, as of October 21, 2021.

## Other Triple-I Resources



[Hurricane Facts and Stats](#)



[Wildfire Facts and Stats](#)



[Tornadoes Facts and Stats](#)



[Flood: State of the Risk](#)