Everybody Complains About the Weather...

A look at the changing weather patterns of the World and how the Property Insurance market is reacting.

June 9, 2021

EPIC Insurance Brokers & Consultants

bms.

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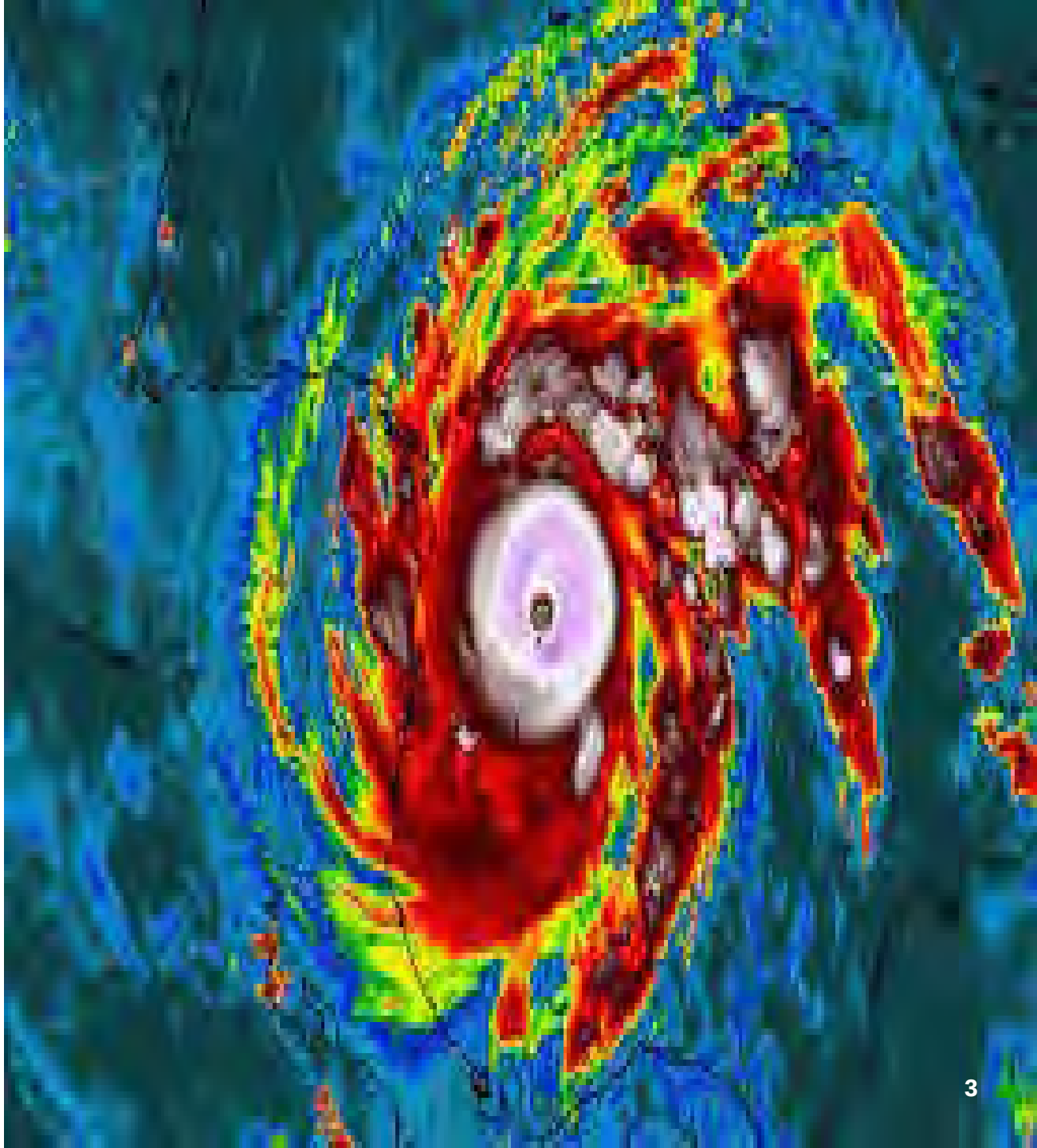
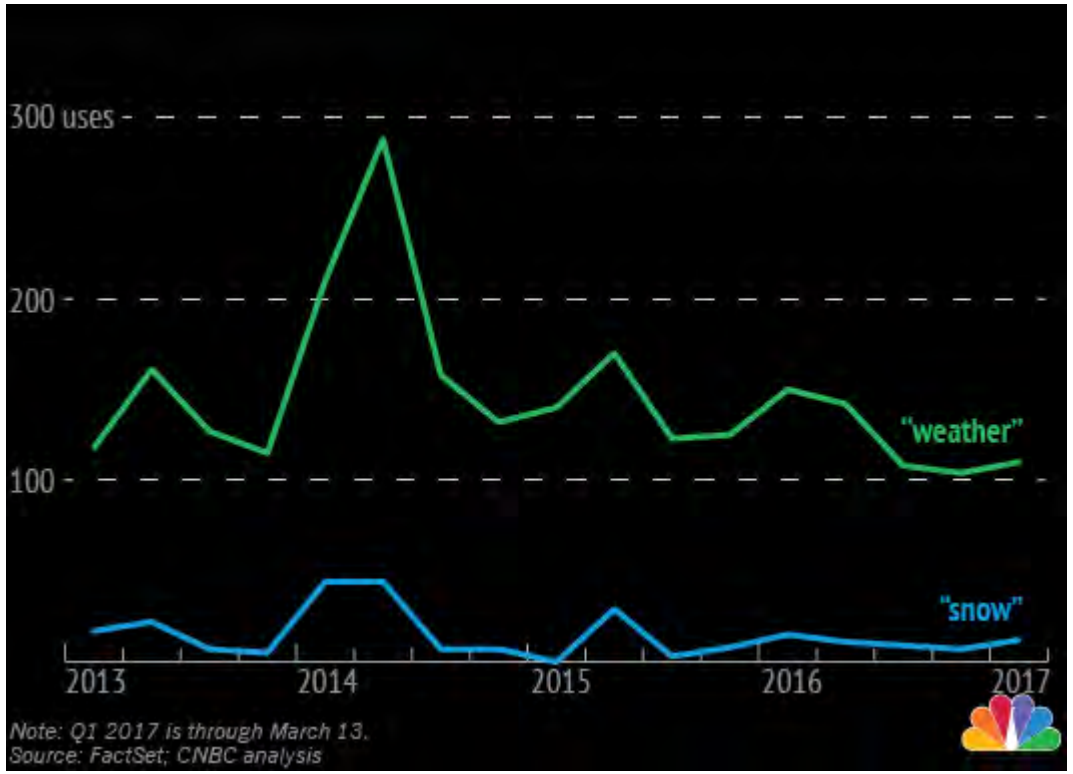
Agenda

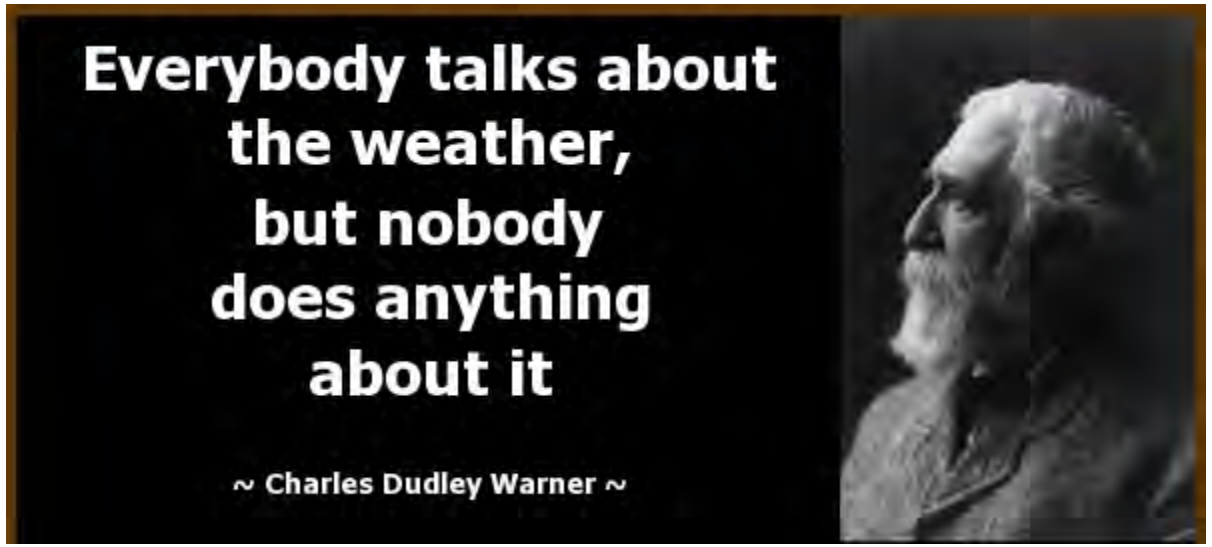
- Introductions
- The Weather – A Holistic Perspective
- The Global Insurance Market
- How to Optimize Your Renewal
- Questions



Weather Should Not Be an Excuse



Mentions of weather related terms in S&P 500 companies earning calls by calendar quarter. (2013 – 2017)



While **companies cannot control** the weather they are now **expected to understand** its **effect on their business** in order to make an educated decision on how to **minimize volatile weather risks** to better control the risk on its financials.

Source: https://www.cnbc.com/2017/03/14/noreaster-big-winter-storm-affects-corporate-earnings.html

Unusual Weather We're Having, Ain't It?

The Wizard of Oz -1939

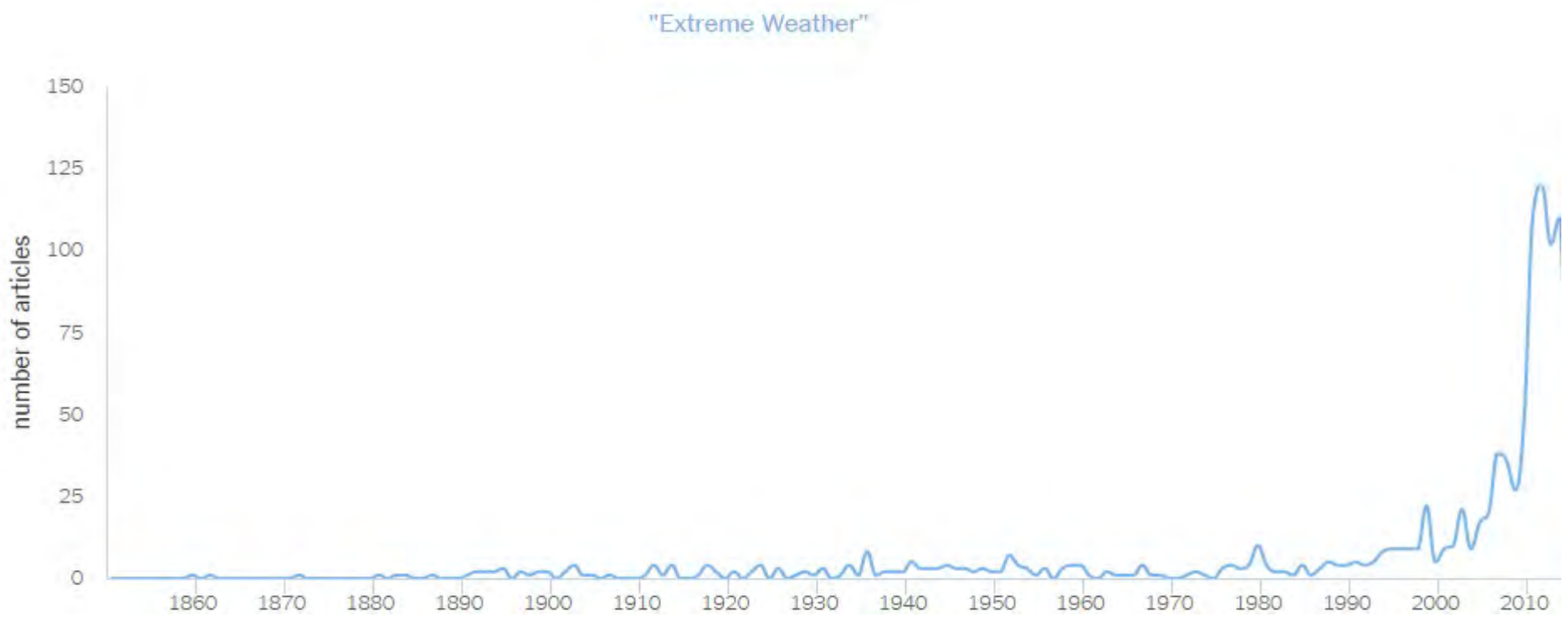
The cowardly lion says "Unusual weather we're having, ain't it?" as he notices the fallen snow on the poppy field.

Interestingly, this might also be the first case where a blockbuster movie promotes the idea that average weather can manifest into "extreme weather," such as a garden-variety tornado in Kansas turning ugly and transporting people to alternate universes.

Movies and More

The Notion of Extreme Weather

When analyzing the **162 years of The New York Times**, one can see that extreme weather has been reported on in the past. However, recently the **term has been used much more frequently** by the media.

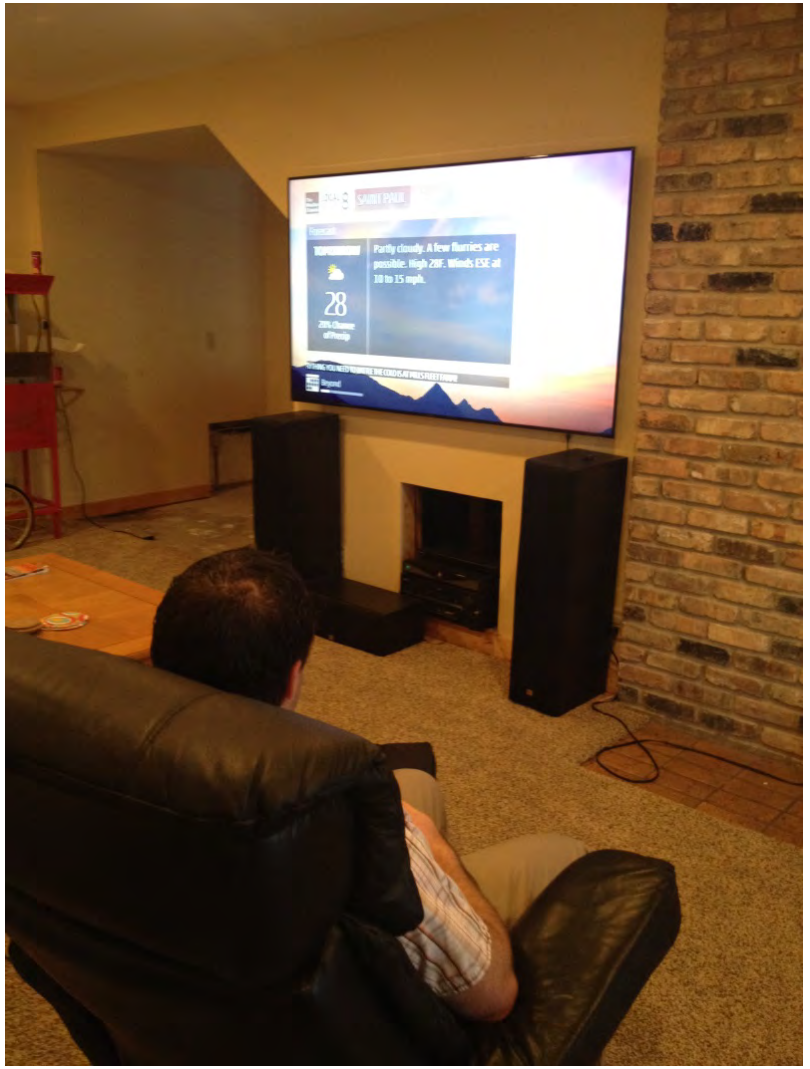


Armchair Meteorologists

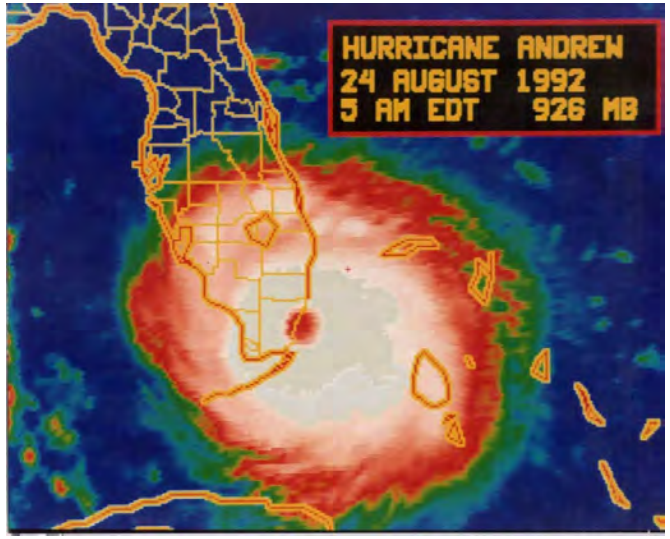
The existence of self-proclaimed **“armchair meteorologists”** is at an all-time high.

It has never been easier to get weather information via a blog, Twitter, or on television, which now has at least **four cable channels** devoted solely to weather.

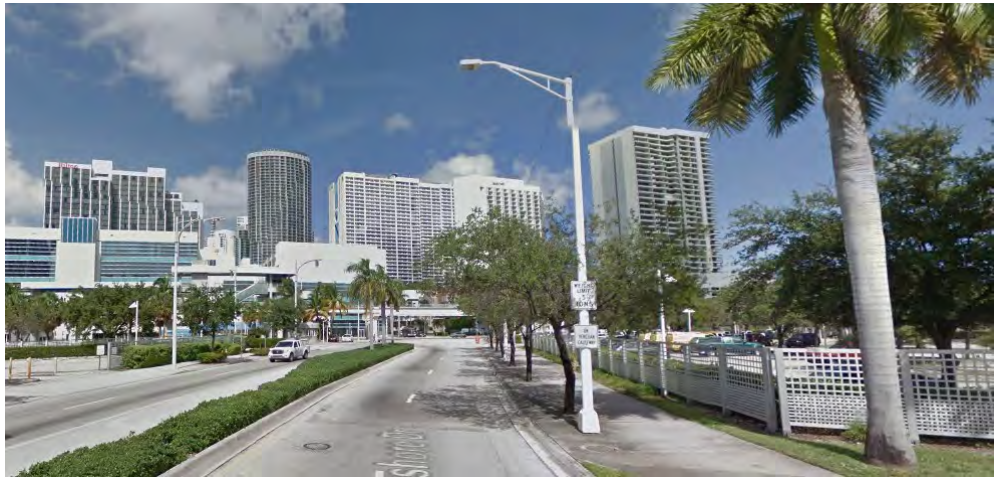
Because weather impacts almost everyone on a daily basis and changes often, it is closely watched. However, with this accessibility of information, **one can easily become brainwashed with the idea that normal weather is somehow extreme**.



Weather Memory Is Generational



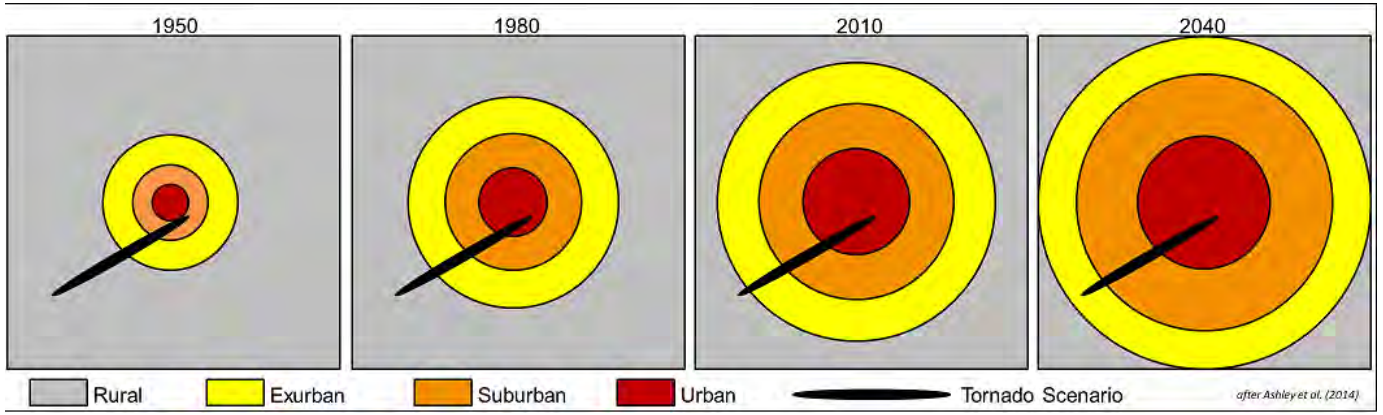
Is Hurricane Andrew still in memory?

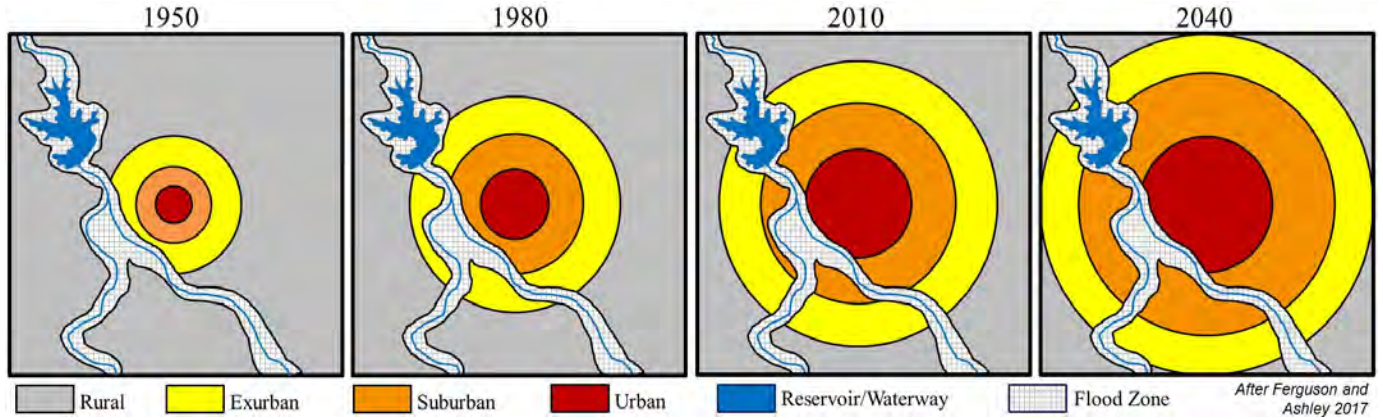


We only really remember the last major weather event.

Few people alive even remember the 1926 Miami Hurricane

The Expanding Bull's Eye Effect





Stephen M. Strader, Ph.D.
Assistant Professor; Geography Program Director
Department of Geography and the Environment
Villanova University

"**Targets**"—i.e., humans and their possessions—of geophysical hazards **are enlarging** as populations grow and spread. It is not solely the population magnitude that is important in creating disaster potential, it is **how the population and built environment are distributed** across the landscape that defines **how the fundamental components of risk and vulnerability** are realized in a disaster.

Natural Catastrophes Increasing?

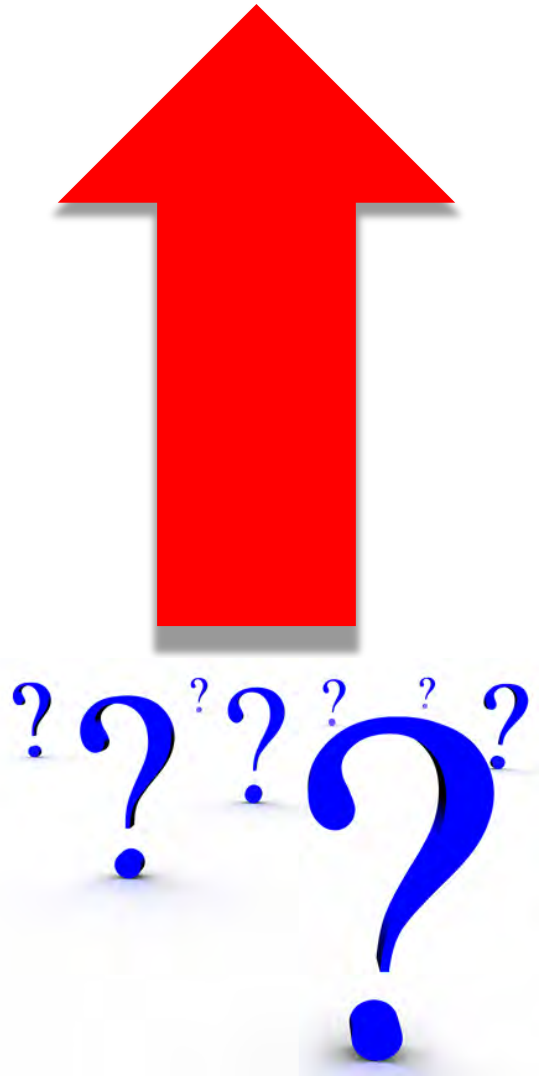
Increasing Population

Increasing Values

Concentration in Exposed Areas

Insurance Penetration

Changing Hazards



Know the Difference

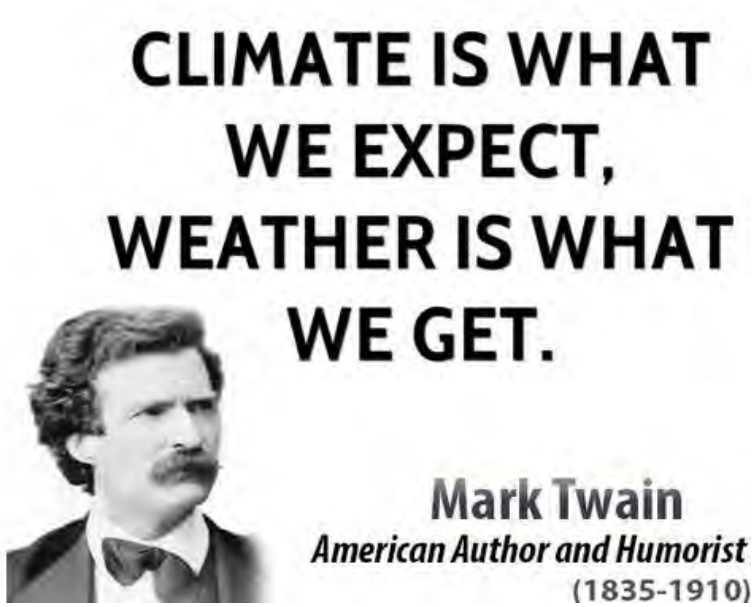
Climate and weather are not the same.

Weather:
is the particular set of abiotic conditions, such as rainfall, sunlight, temperature and humidity affecting a particular area at a particular time.

Climate:
is the overall pattern of weather at that area.

Weather changes daily.

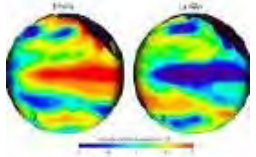
Climate changes over decades, or hundreds or thousands of years.



Complex Physical Problem

Changes in the atmosphere and/or ocean can trigger changes in the variability and overall state of the weather and climate locally in time and space.

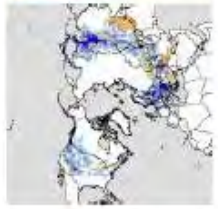
Remote Forcing → **Changing Variability** → **Changing Risk**



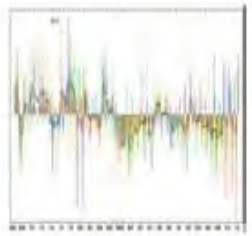
El Nino / La Nina

Sea Ice and Glaciers

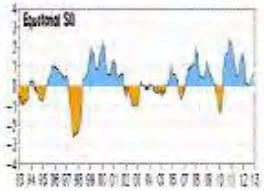
Solar Energy



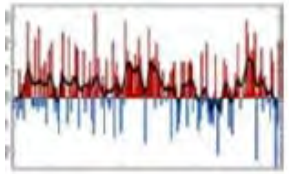
Snow Pack



Upper Air Temperatures



Sea Surface Temperatures



Surface Temperatures

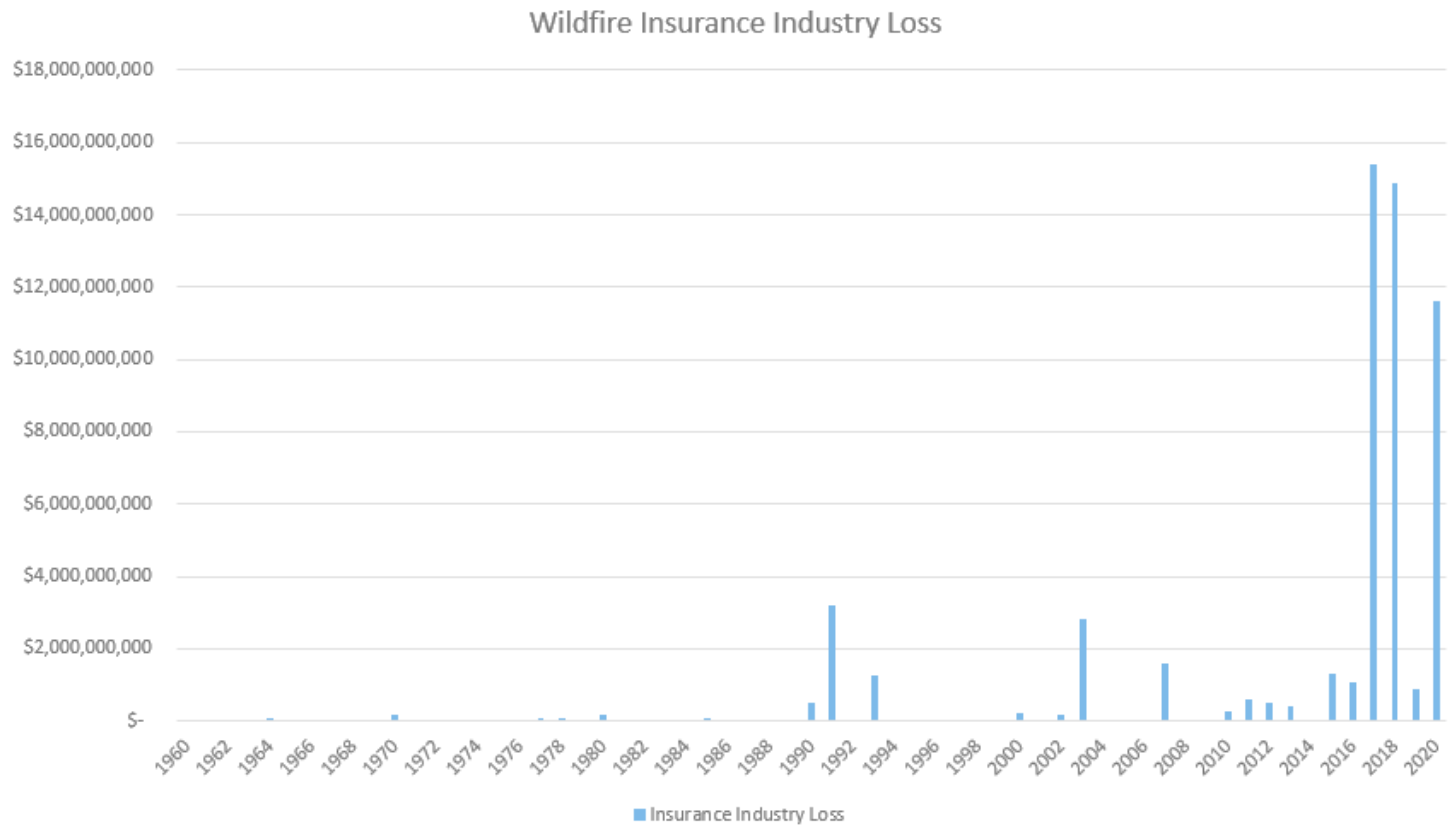
Drought

Tropical Weather

Rainfall / Wind

Severe Storms

Wildfire Events



Wildfire which used to be considered as a **secondary peril** for the insurance industry is now considered a primary peril for the insurance industry. In fact, there are now **12 different hazard model vendors** that are trying to help the insurance industry understand this risk.

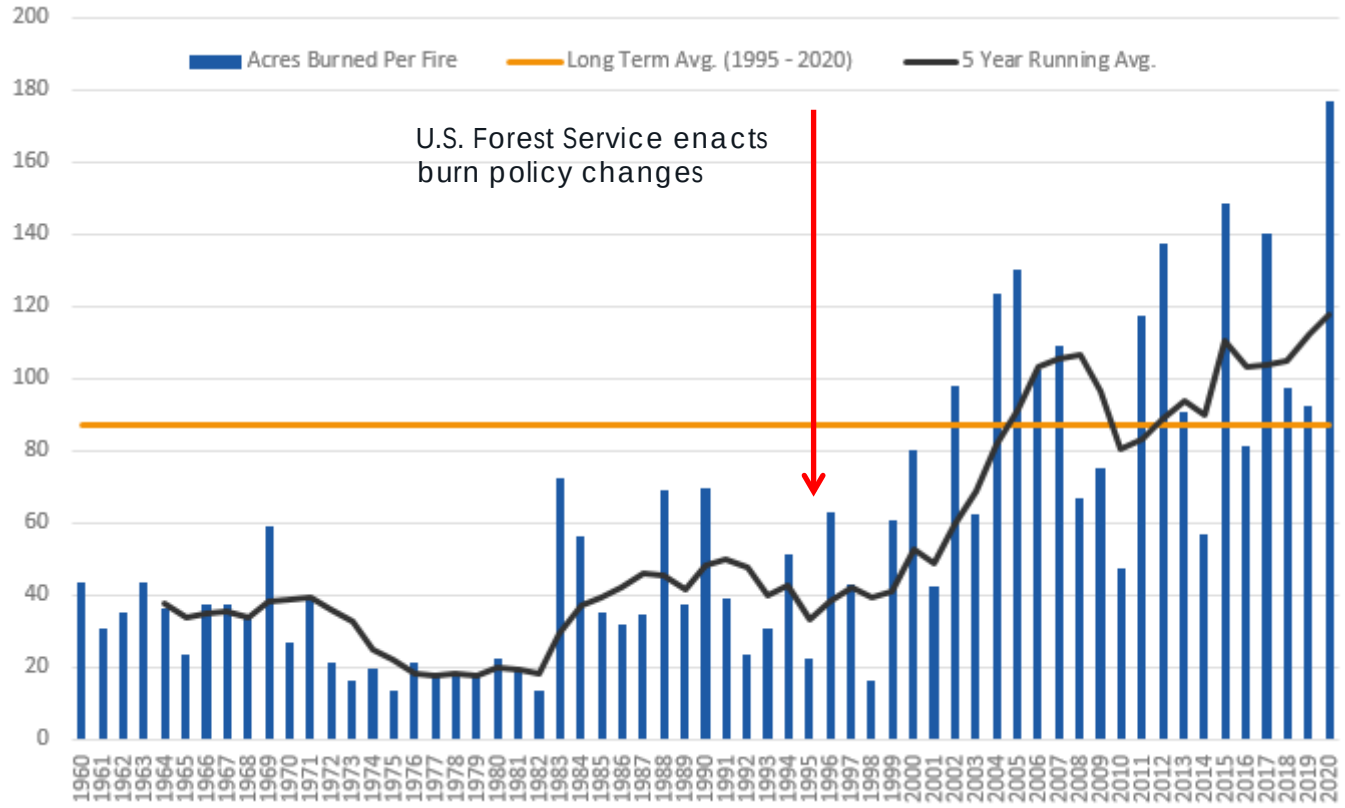
U.S. Wildfire Burn Frequency

The National Interagency Fire Center (NIFC) and National Interagency Coordination Center maintained wildfire records from 1960 to 1982 before the NIFC began its current method of data compilation from states and other agencies in 1983.

Reasons?
Larger Fires

Changing firefighting tactics and land use.

Extended fire season
- more heat and fuel, and shifts between wet and dry periods.



Source: NIFC

Wildland-Urban Interface (WUI) is Growing

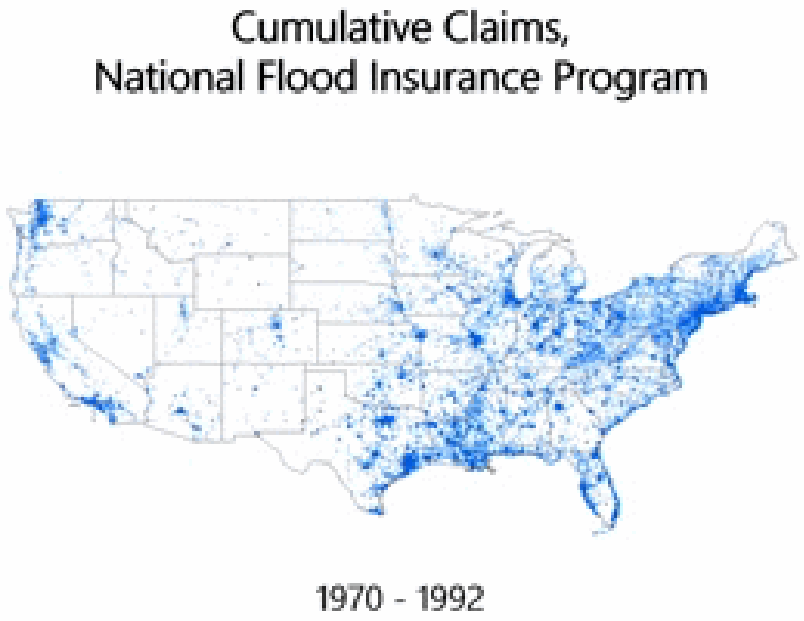
1993

2016

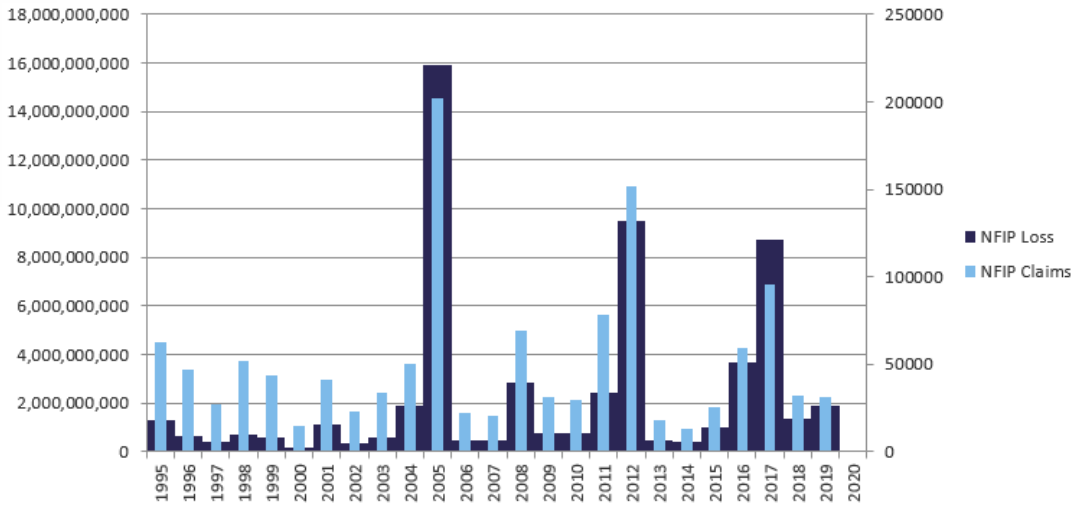
Source: Monitoring Trends in Burn Severity (MTBS Unnamed California Wildfire San Diego Area

This unnamed wildfire that occurred in San Diego in 1993 burned very few structures. Today it would be a major wildfire loss for the insurance industry. **The WUI is growing more populous, the likely result being greater wildfire losses in the future**.

NFIP National Claims and Losses



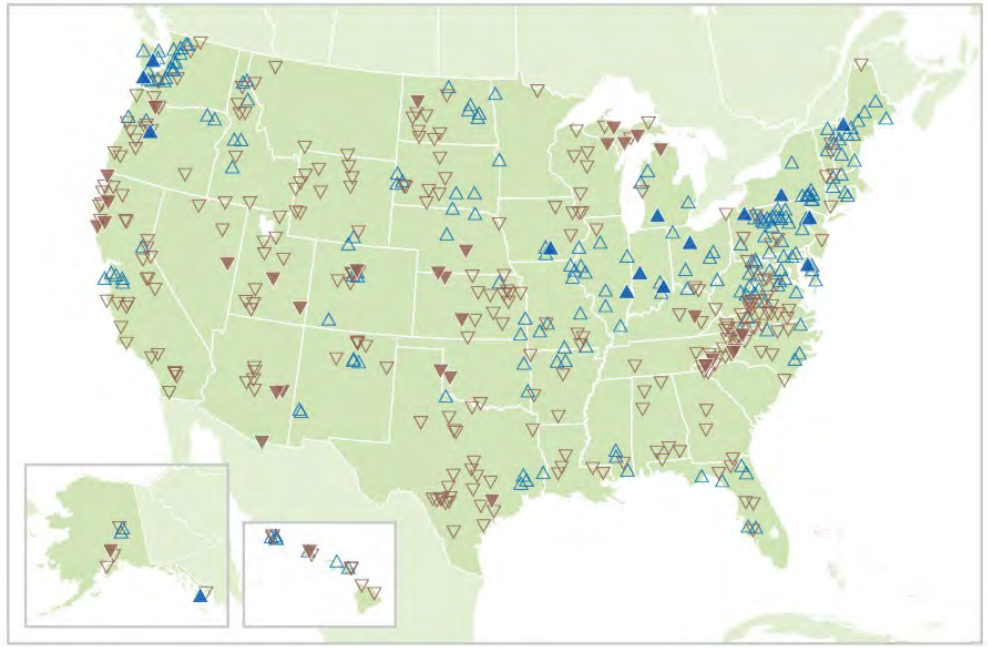
Federal Emergency Management Agency (FEMA) has released tens of millions of records from the National Flood Insurance Program (NFIP). The data release includes over 50 million policy transactions from the past decade and information on 2.4 million damage claims dating back to 1970, representing nearly **$70 billion in payments**.



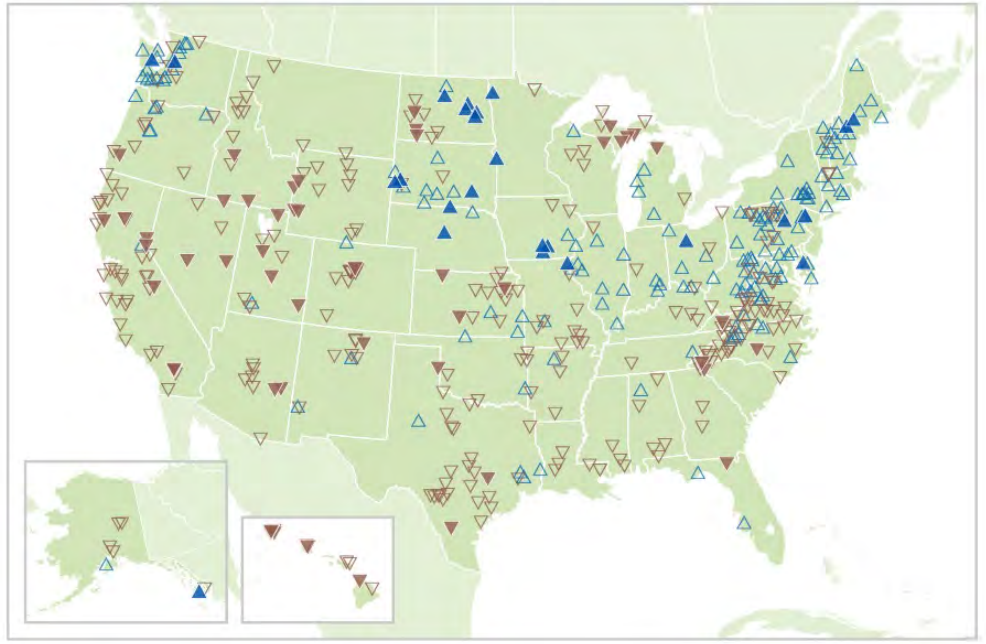
Flood insurance claims are piling up across the nation, even in areas far from the shore. **Hurricanes are the biggest driver of loss.**

River Flood Frequency and Magnitude

Change in the Magnitude of River Flooding in the United States, 1965–2015



Change in the Frequency of River Flooding in the United States, 1965–2015



▼ Significant decrease

▽ Insignificant decrease

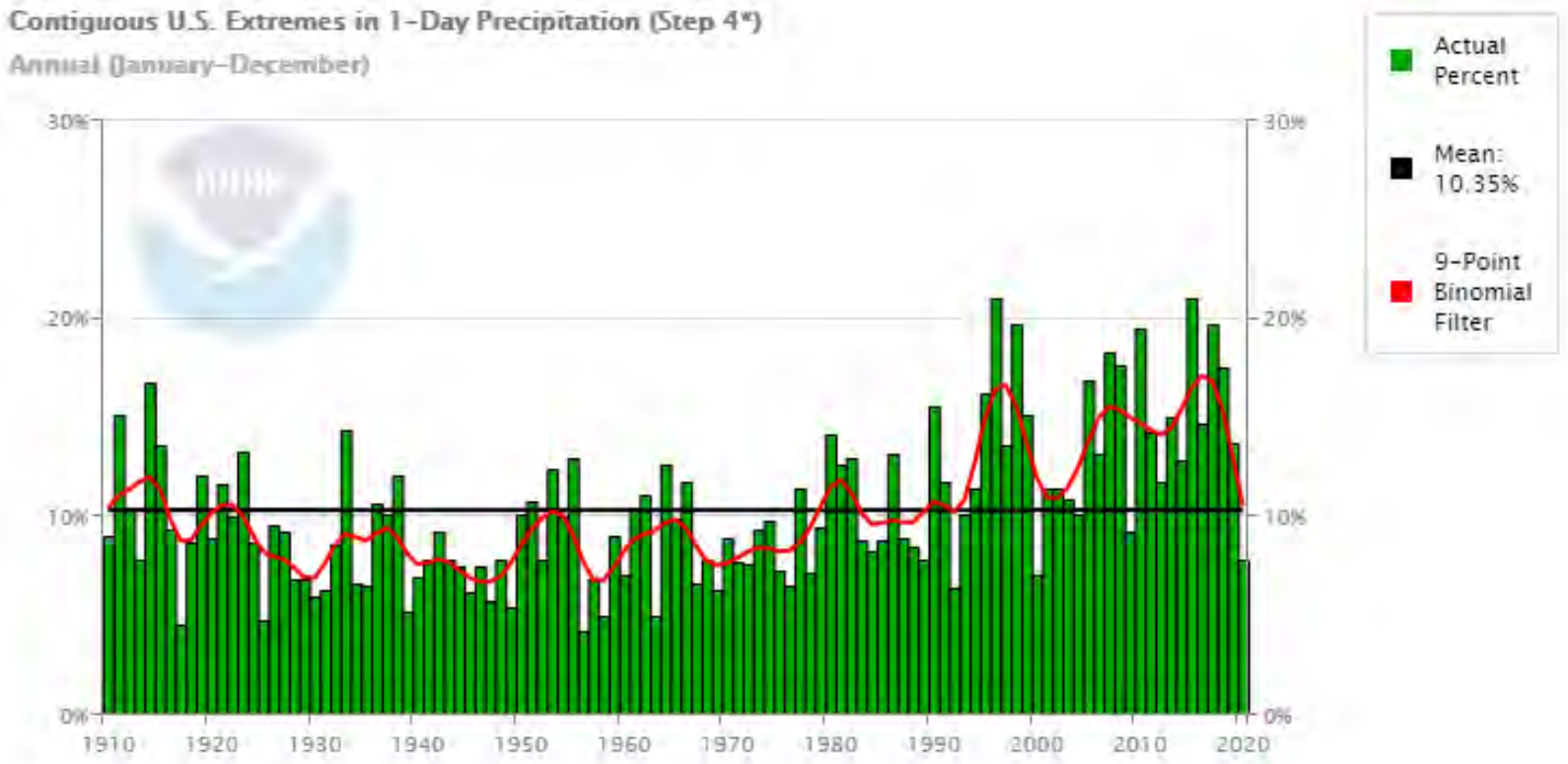
△ Insignificant increase

▲ Significant increase

Data source: Slater, L., and G. Villarini. 2016 update and expansion to data originally published in: Mallakpour, I., G. Villarini. 2015. The changing nature of flooding across the central United States. Nature Climate Change 5:250–254.

For more information, visit U.S. EPA's "Climate Change Indicators in the United States" at www.epa.gov/climate-indicators.

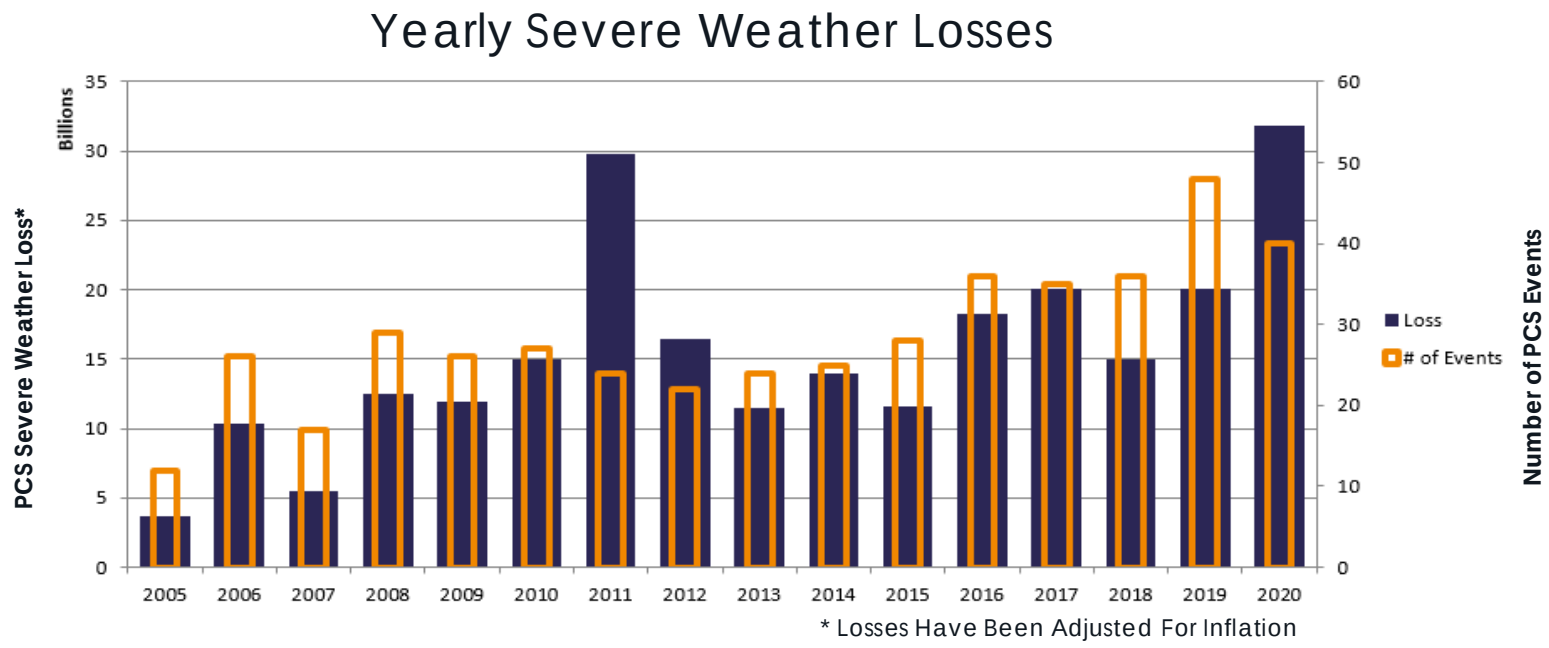
Daily Rainfall Trend



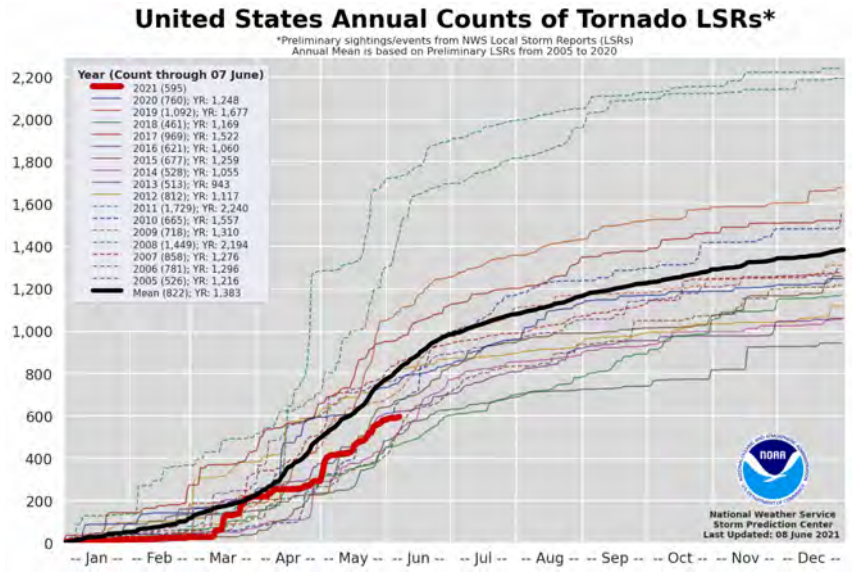
This figure shows the percentage of the land area of the contiguous 48 states where a much greater than normal portion of total annual precipitation has come from extreme single-day precipitation events. The bars represent individual years, while the line is a nine-year weighted average.

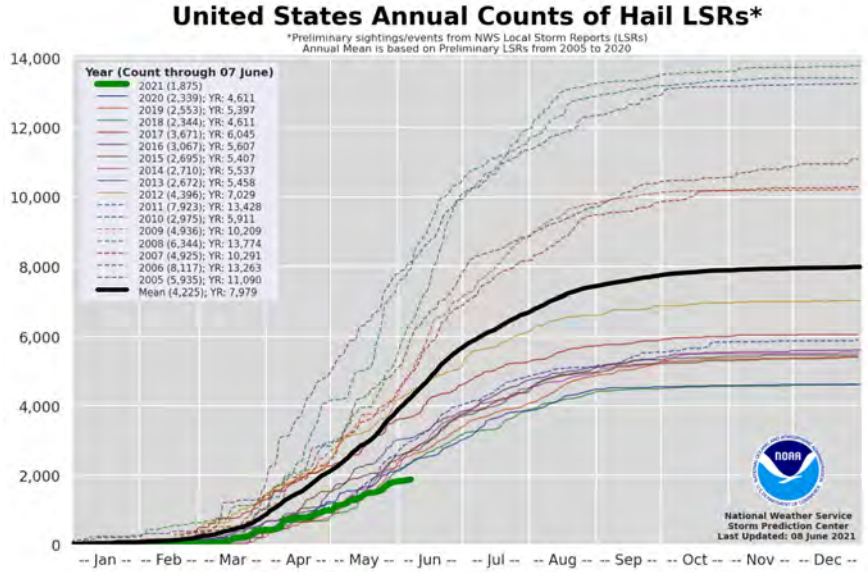
Severe Weather Losses – U.S.

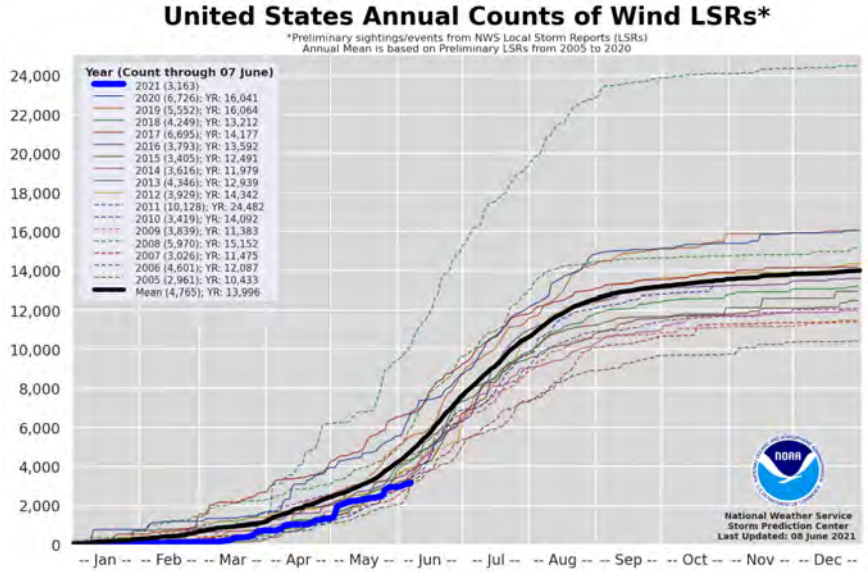
2020 is likely the highest loss year in modern history! On par with 2011 which was largely driven by major tornado losses. This year actually had less major tornado loss events with losses driven by wind events. **One of the largest loss events in the U.S. was in Iowa due to the Derecho.**



Short Term Trends - Severe Weather Reports



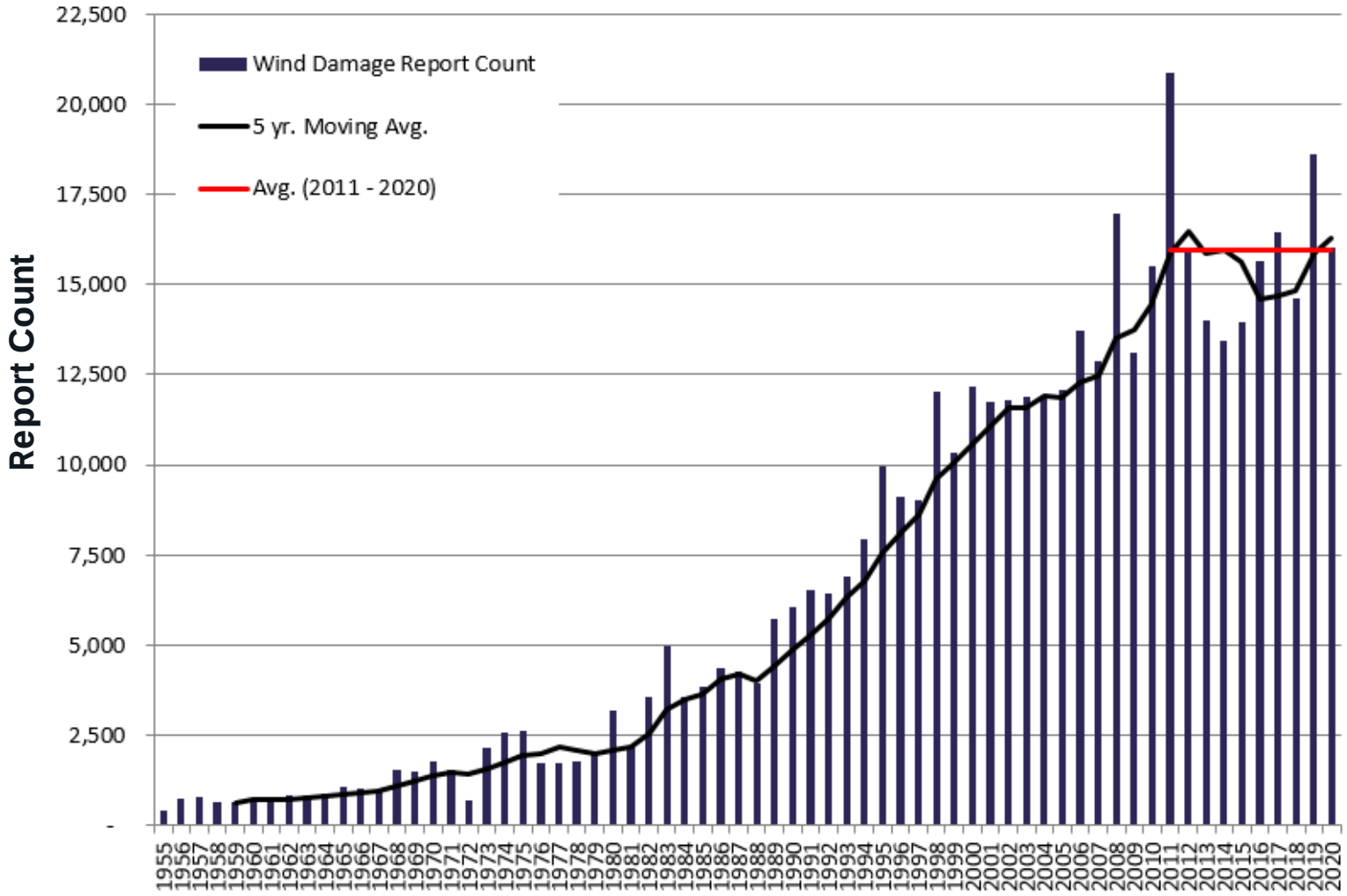




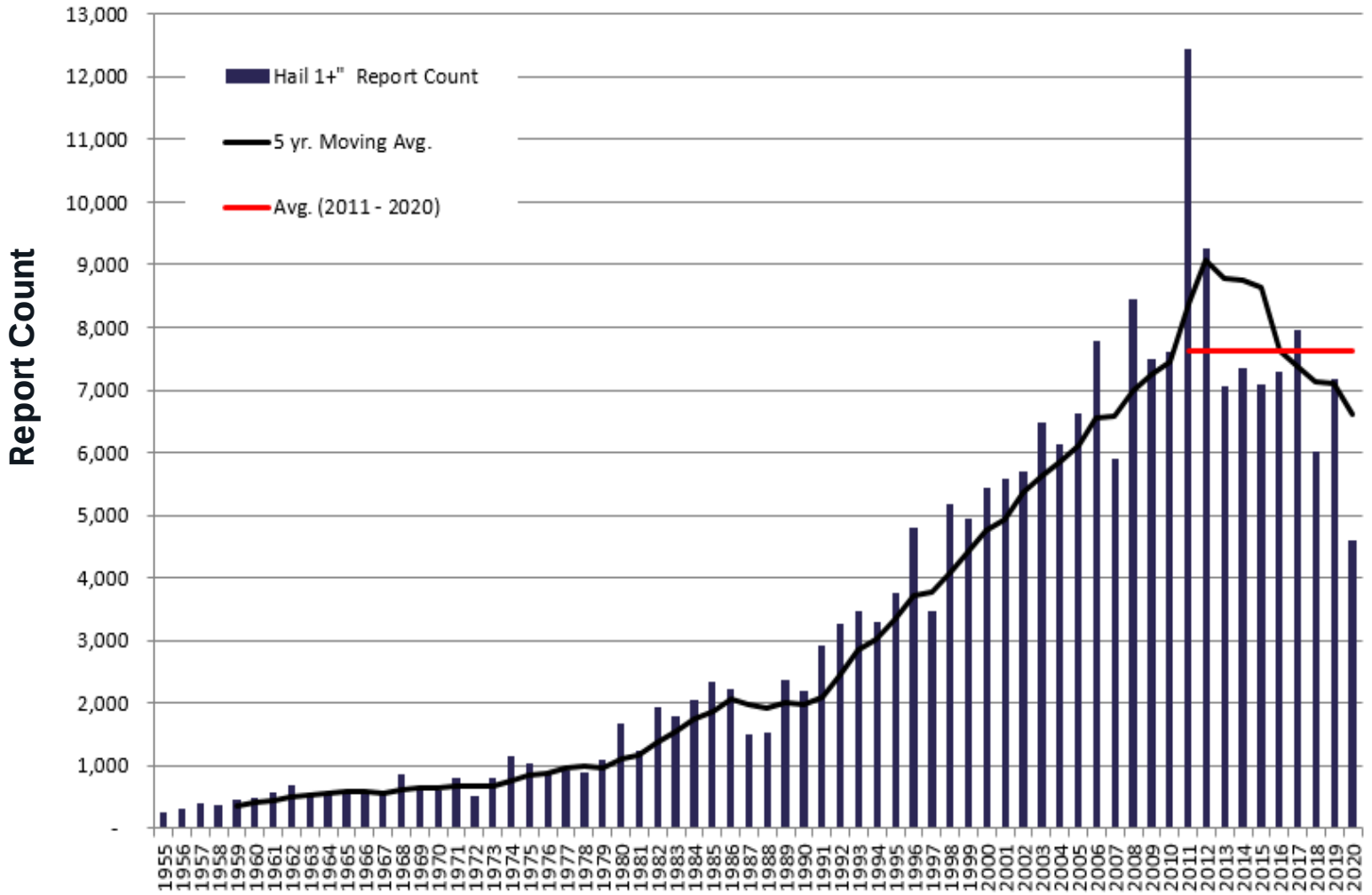
- The U.S. YTD has recorded **595 Tornadoes (Avg 822)**
- Hail YTD reports **1,875 (Avg 4,225)**
- Wind YTD reports of damage stand at **3,163 (Avg 4,765)**
- **No Severe Weather peril is above the mean so far this year.**

Source: NOAA Storm Prediction Center

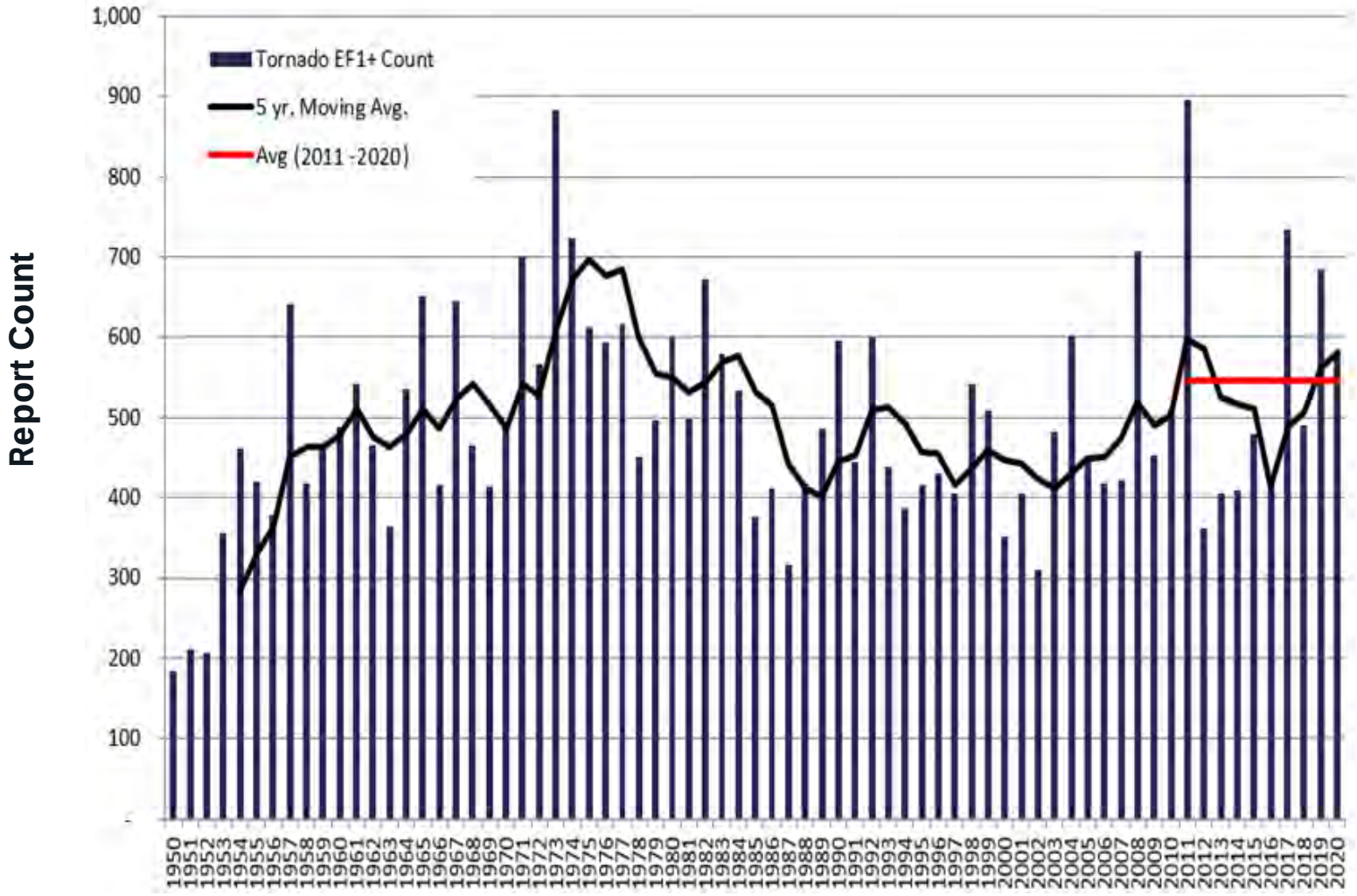
U.S. Annual Counts of Wind Damage Reports



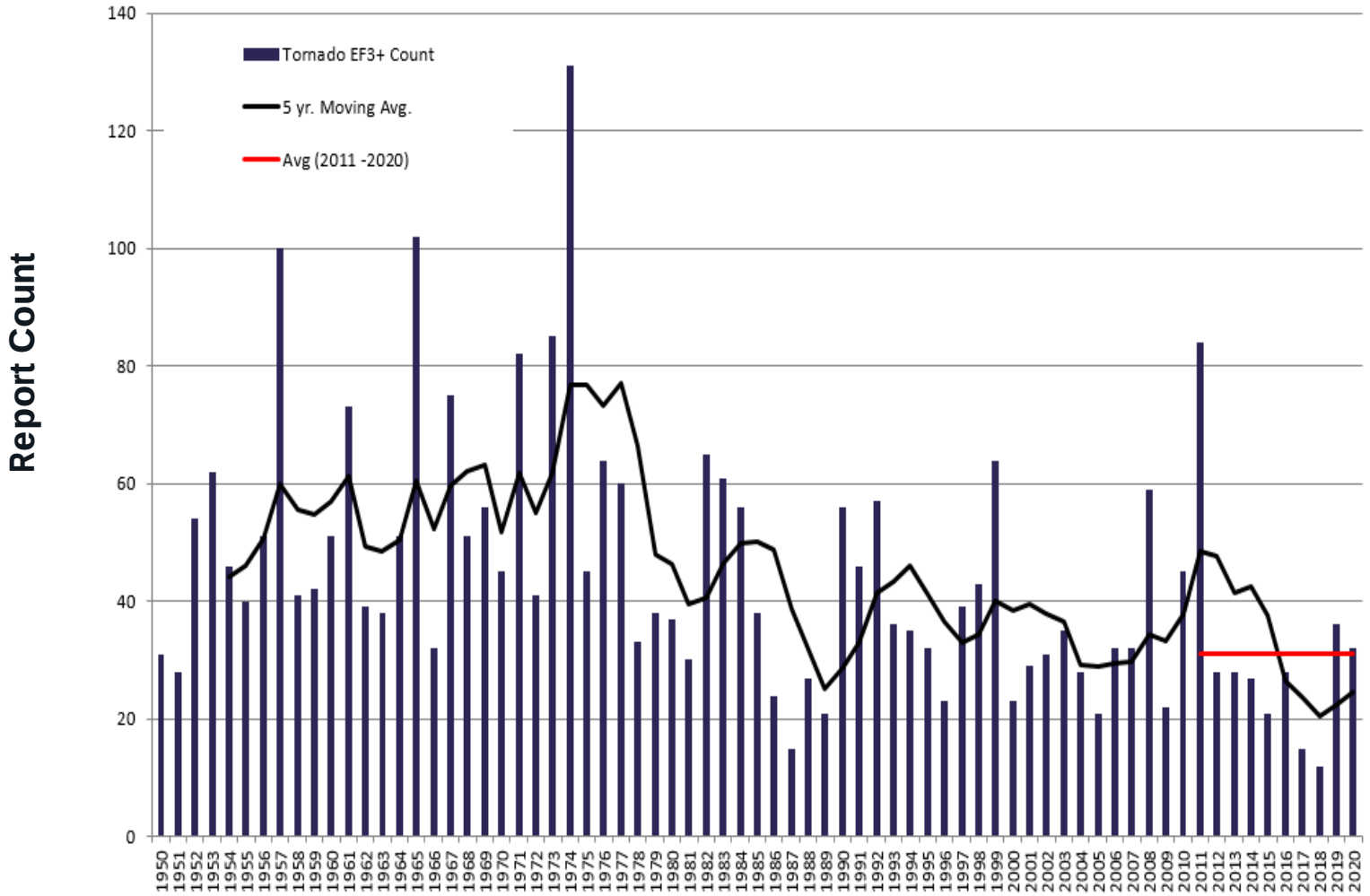
U.S. Annual Counts of Hail Reports of 1 inch+



U.S. Annual Count of EF-1+ Tornadoes



U.S. Annual Count of EF-3+ Violent Tornadoes

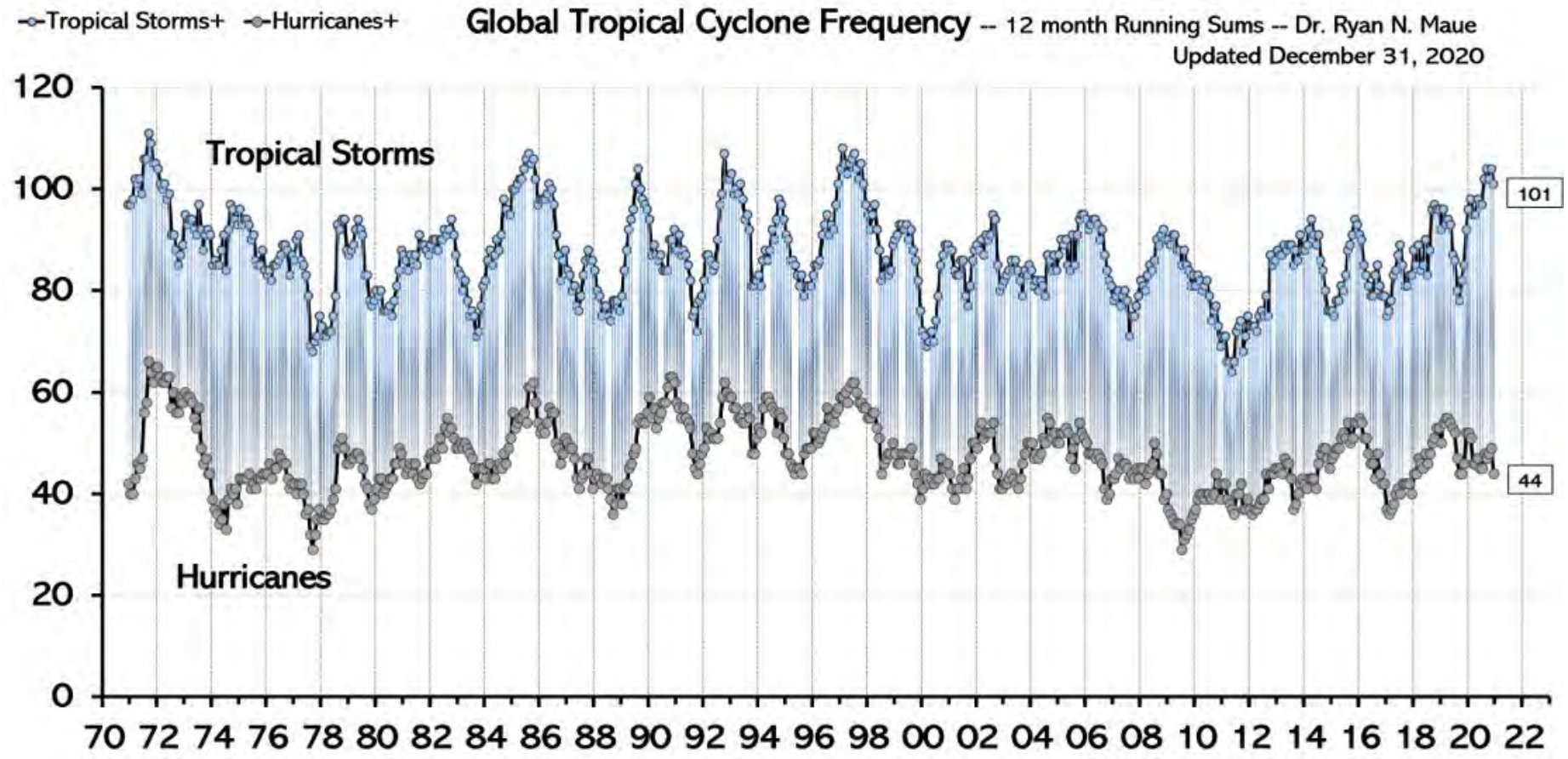


Matter of Luck

Tornado scar from the Homer, IL tornado on Sep 9th 2016 shows how very close it came to a house. Source: Photo by Jeremy Wolf

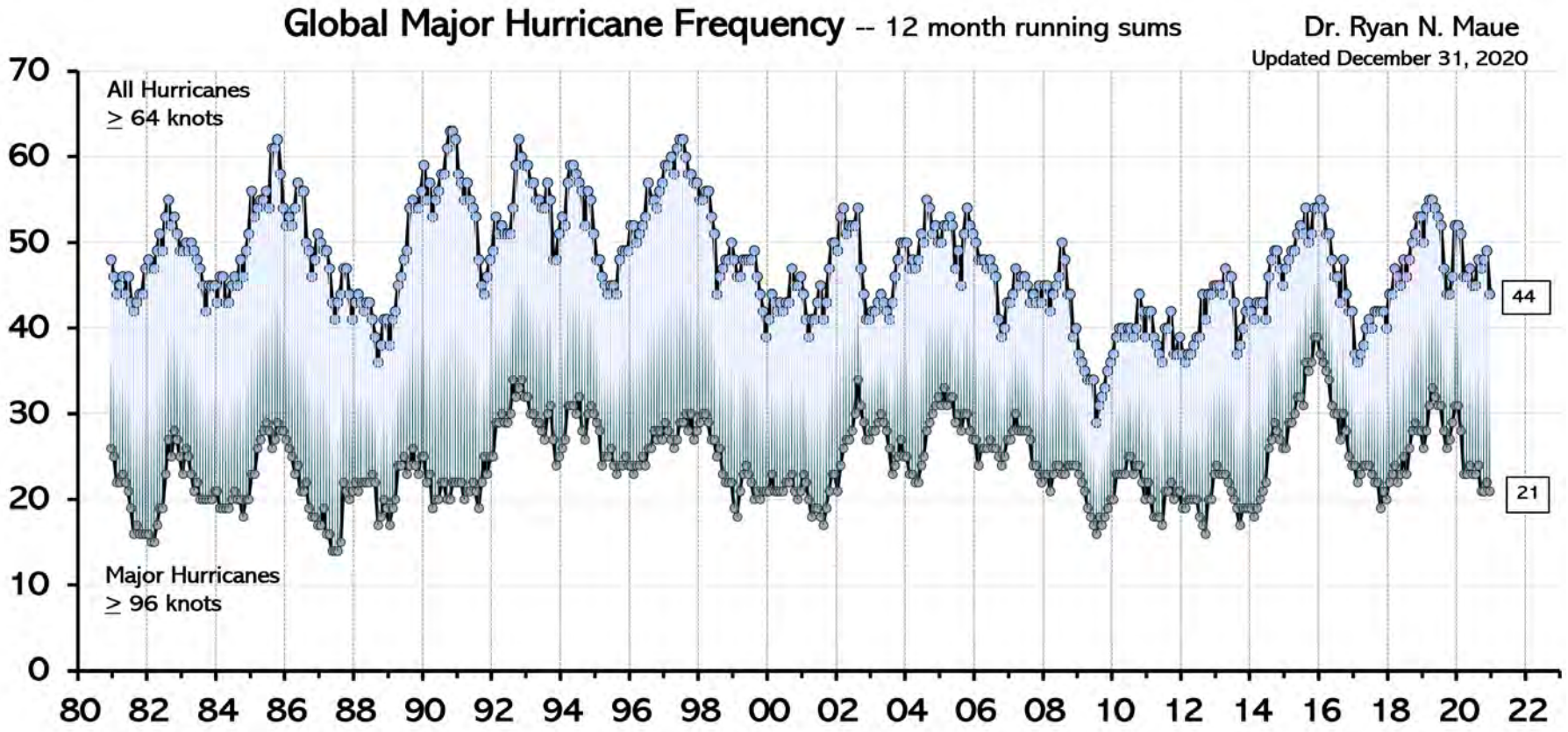
Severe weather losses are often a **matter of luck**. The large tornado hitting Nashville in 2020 is a reminder that tornadoes can hit any areas. Hail storms continue to be a costly driver to the insurance industry. Wind also hit farm fields in Iowa. **Severe weather has no boundaries** and often it is just a matter of luck.

Global Named Storm Frequency



The top time series is the number of named storms that reached tropical storm strength. The bottom time series is the number of global tropical cyclones that reached hurricane strength.

Global Hurricane Frequency

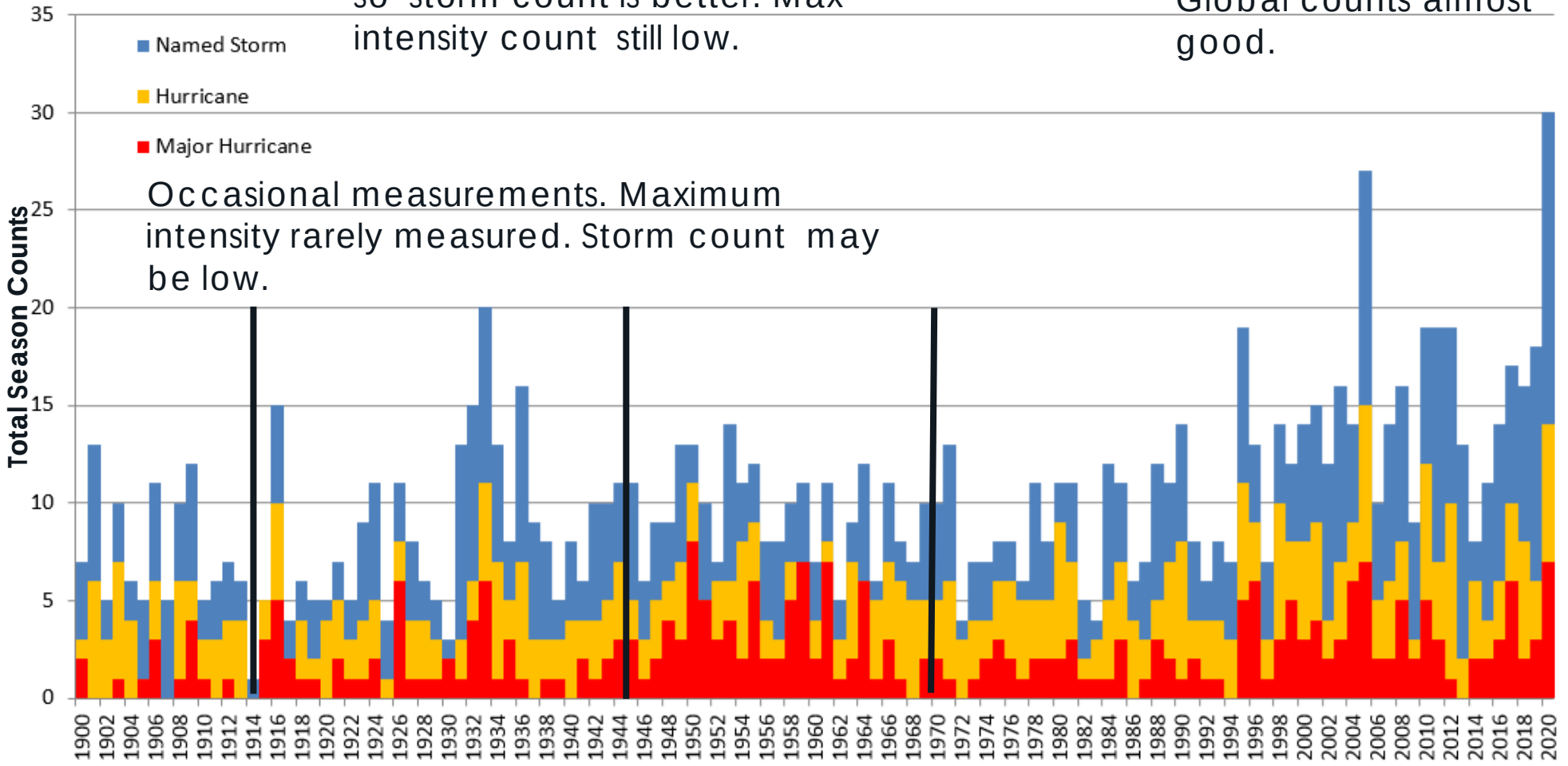


The top time series is the number of global tropical cyclones that reached hurricane strength. The bottom time series is the number of global tropical cyclones that reached major hurricane strength. One thing to notice about **hurricanes is the large variability in their occurrence from year-to-year** and decade-to-decade.

Atlantic Named Storm Activity

World War boats and aircraft so storm count is better. Max intensity count still low.

Hourly measurements. Global counts almost good.

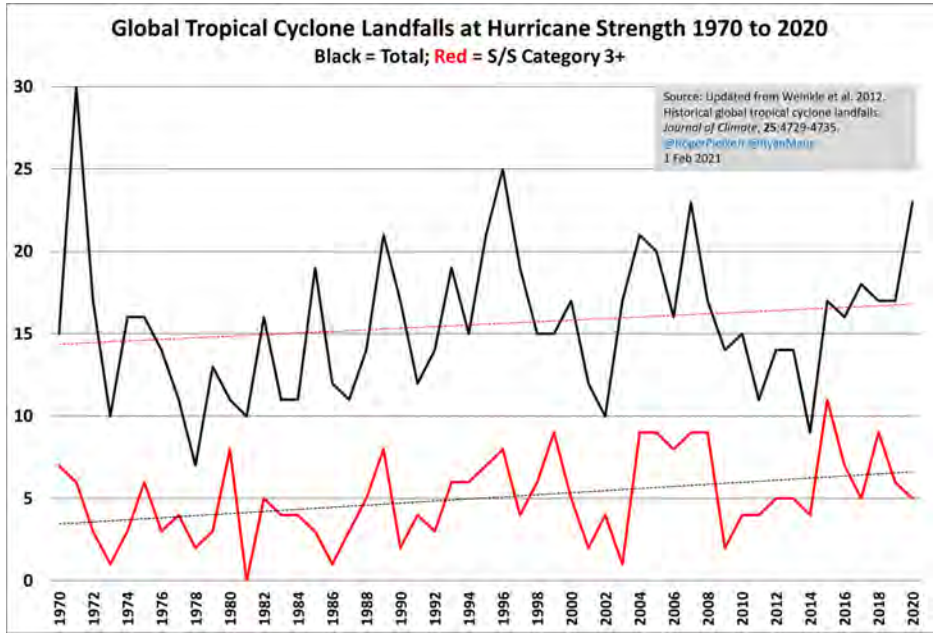


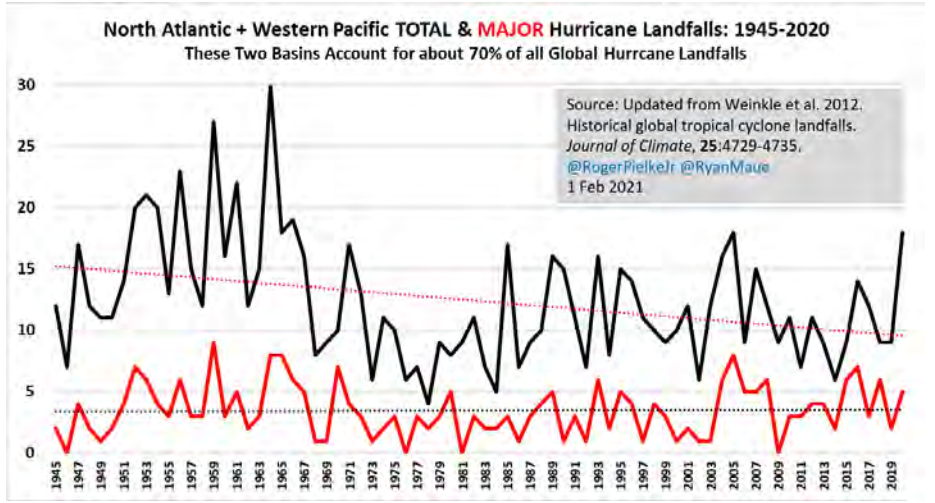
Source: NOAA NHC

Global Tropical Cyclone Landfalls

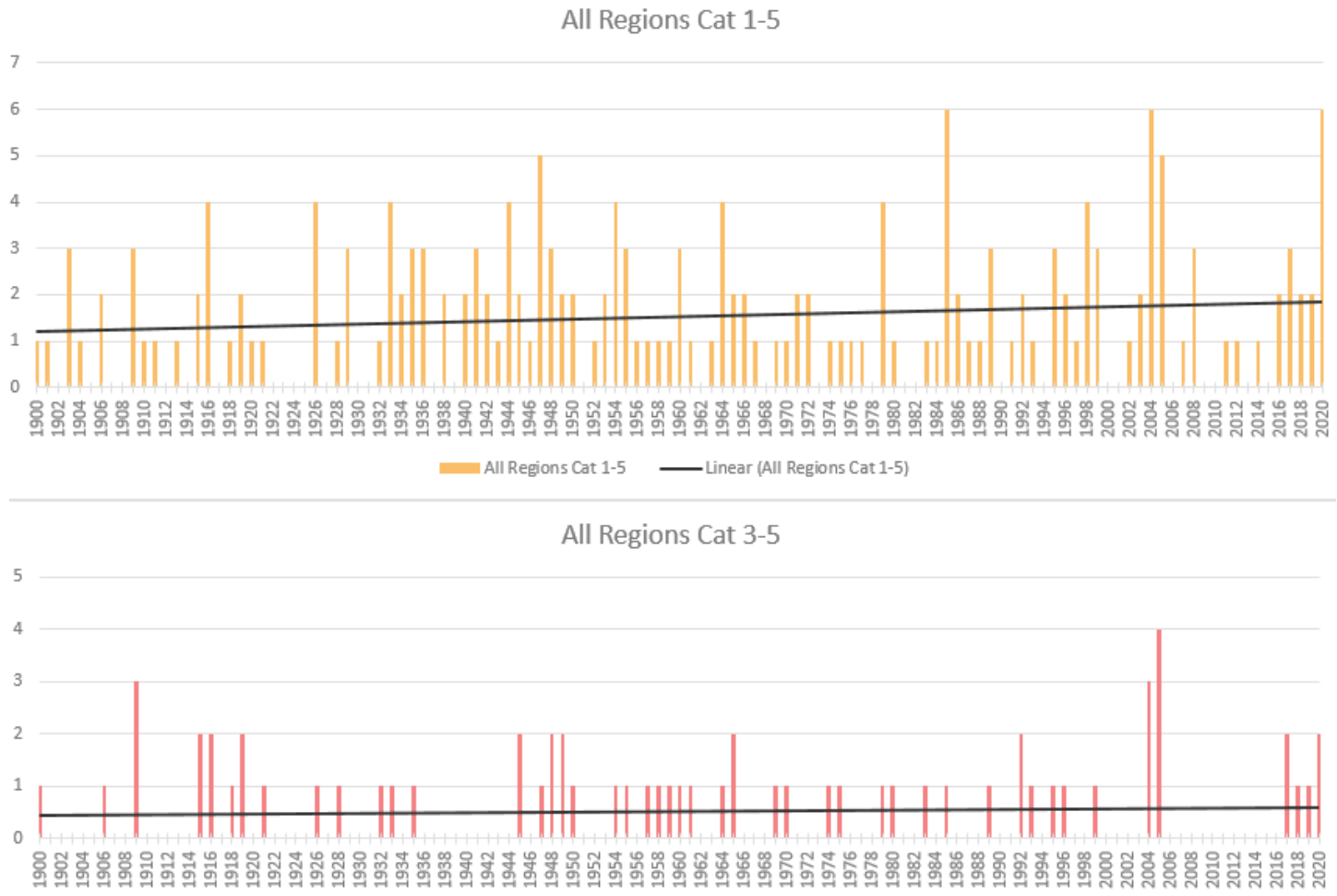
23 total landfalls, 2020 saw the most hurricane strikes since 2007, and **the third most since 1970**.

The large number of 2020 landfalls was in part to the very busy North Atlantic hurricane season, **which saw 9 total landfalls**.



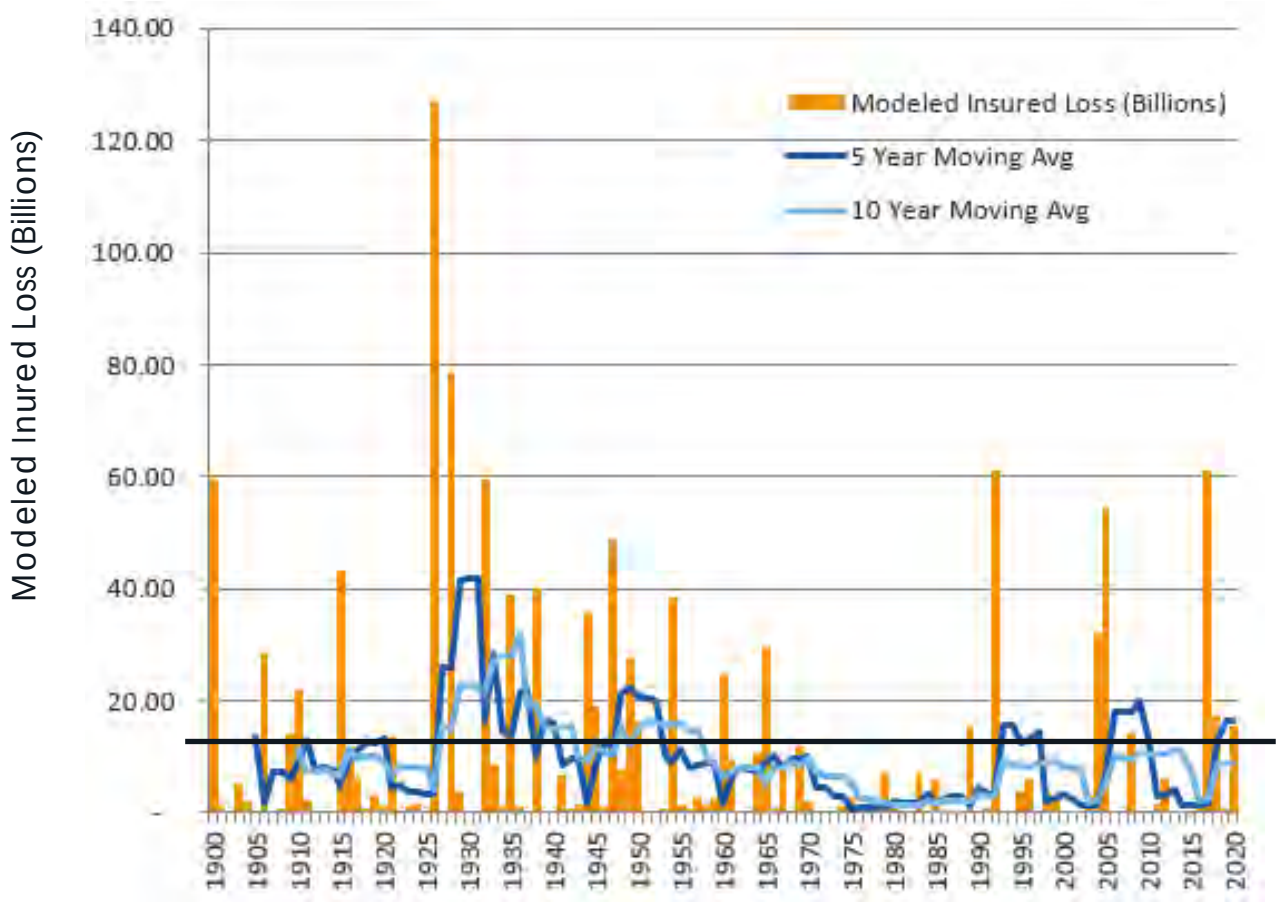


U.S Landfilling Hurricane Trends



- **The North Atlantic averaged 2.5 landfalls per year 1970 to 2019**
- **Very Little** if any trend in landfalling hurricanes. **No Trend** in Major Hurricane Landfalls

Named Storm Insured Loss Trend



Long Term Average Insured loss 10 Billions

Source: Confidential Modeling Company

Using modeled losses removes the uncertainty of adjusting historical losses to account for socioeconomic factors.

Is the Complaining About the Weather Warranted?

Severe Storms

- It depends - Definitely not tornadoes Wind -Yes Hail- Maybe. **Loss Yes due to increase in exposure and storms shifting East.**

Heavy Rain/Flood Events

- **Depends on region**, generally yes to **more heavy rainfall events**. Poor urban planning = more floods and more loss.

Wildfires

- Yes recently– **Humans are causing most of the wildfires** and increase in exposure into the WUI = more loss.

Named Storms

- More storms in the basin. **Landfalls are what matter and there no long-term trend, lots of activity recently.** Storms are however getting stronger when they do form.

Weather Helps Drive the Insurance Market Cycle

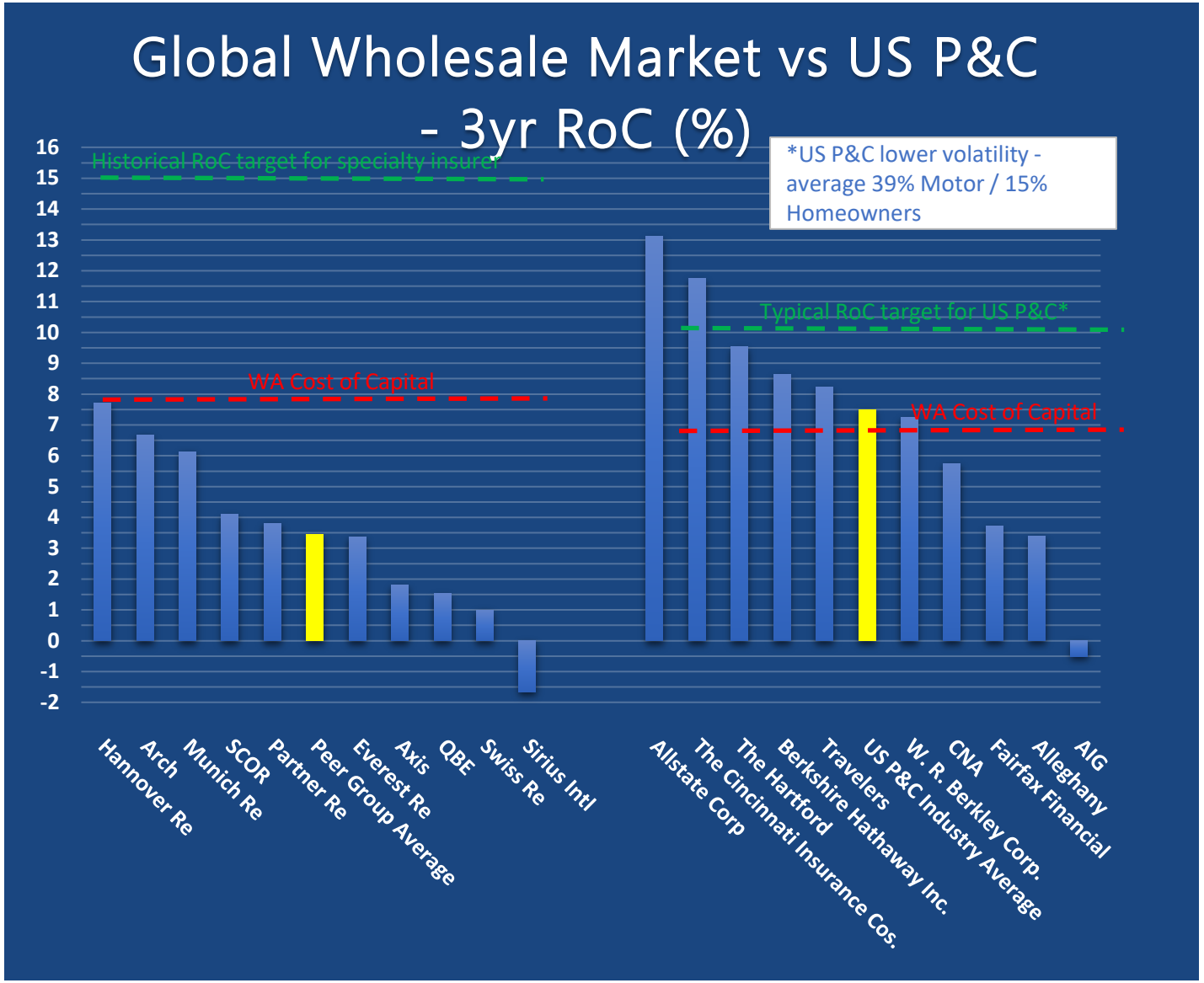
- **Weather Impacts all business**
- Weather **can't be** used **an excuse** and insurance is a tool to limit risk
- Understand the **trend in weather and exposure**
- **Weather** can have a large **influence** on insurance **market cycles**
- The lack of major hurricane landfall between 2006 – 2016 likely helped the soft market
- Revision to the mean in hurricane landfalls and other **catastrophic losses around the world are** increasingly common and devastating when combined with **social and economic factors**. Several years of costly disasters and social factors have **compounded losses for insurers**, driving up the cost of coverage overall

The Global Property Market

HOW WE GOT HERE

15% Benchmark
a Distant Memory

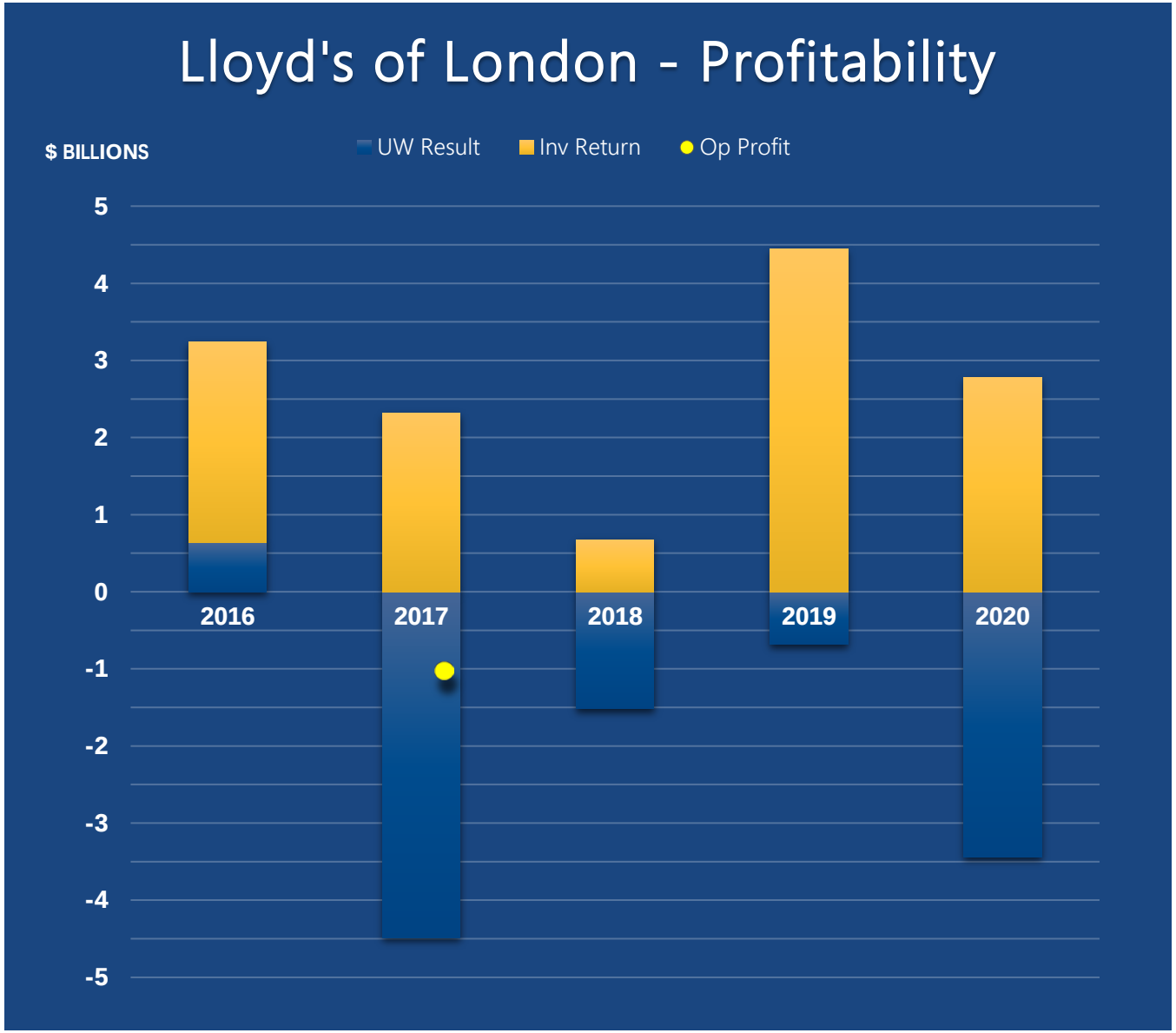
- **Weak underwriting results, modest investment returns, and shrinking reserve releases have pushed RoC down into low single figures – well below ~8% average cost of capital**
- **With interest rates at historical lows and yield hard to come by, response must come from underwriting.**
- **Exposure change and elevated catastrophe activity - US has experienced record hurricane landfall frequency and a marked rise in "secondary peril" losses (multiple wildfires, severe convective storms)**



INSURER PROFITABILITY

Global Insurance
Return-driven Hard Market

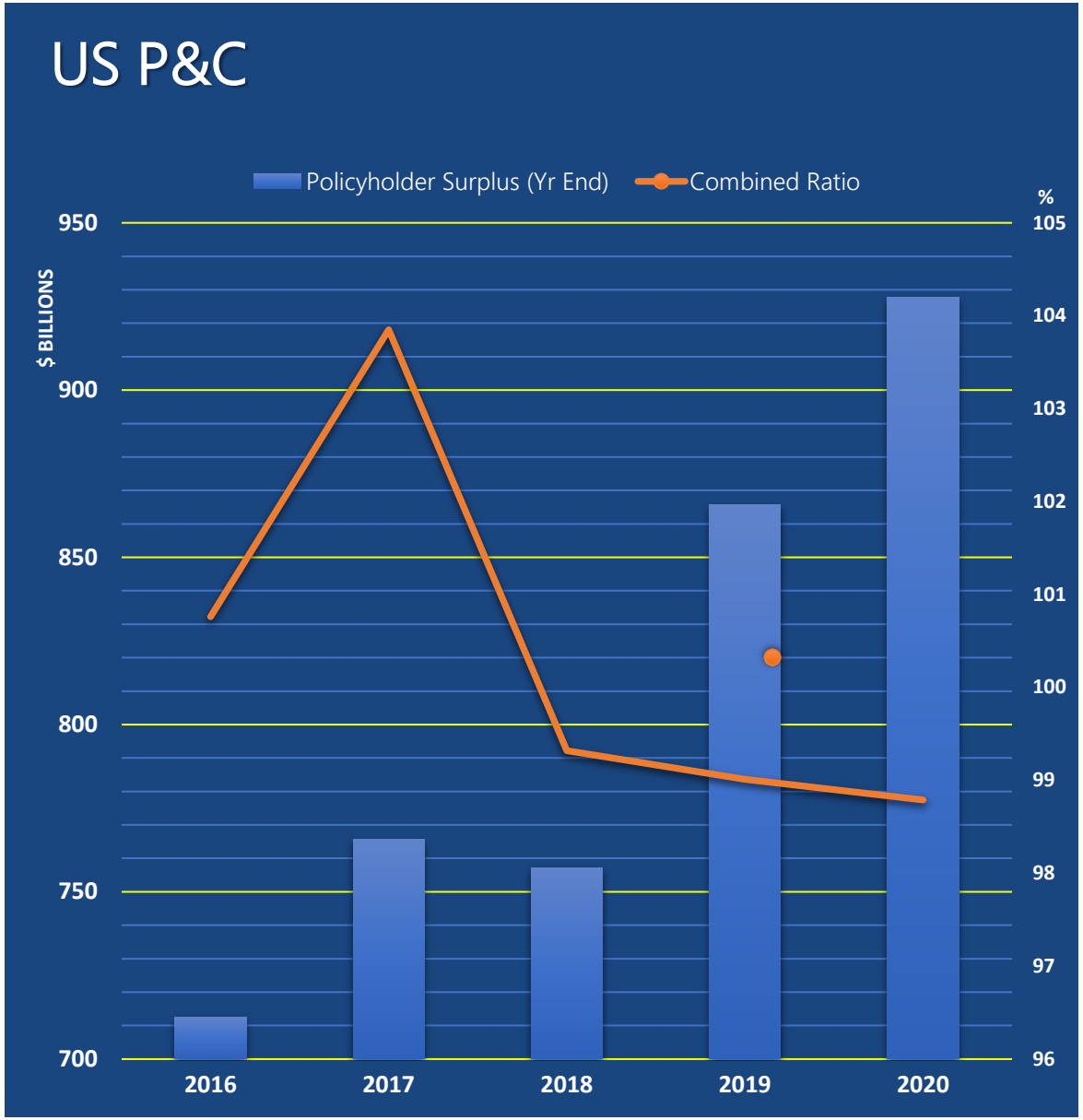
- Rate uplift due to protracted financial underperformance, not capacity shortage
- Global wholesale underwriting largely in the red since 2016
- Lloyd's and many company market counterparts posted outright losses in 3 of the last 4 years
- 2019 profits entirely investment-based (December '18 sell-off followed by tech boom and accommodative Fed drove ~30% growth in equity markets, and investment grade bonds returned ~14%)



WHAT WE ARE SEEING NOW

Signs of Moderation
but Challenges Persist

- FY2020 global wholesale loss ratios generally well over 100%, and secondary peril concerns firmly substantiated by Winter Storm Uri in 1Q 2021
- Nonetheless, normalized (ex-COVID) combined ratios fell by around 5% YoY during 2020 and largely remained below 100% in 1Q2021 despite Uri
- Rate increases moderated across multiple lines up to 1st April, particularly E&S property (renewed interest from domestic carriers and aggressive budgets in London)



GOING FORWARD

Capacity

- Capacity Stabilization: Many carriers cut back in the last 2 years to levels they should sustain
- Continued new capacity entering market – Alcor, Convex, Core Specialty, Fidelis, Ki, Inigo, Rokstone

Coverage and Terms & Conditions

- Deductibles - Wind, Flood and Wildfire perils will continue to see upward pressure
- Restrictions in First Party Cyber, Contingent Time Element, Convective Wind, Communicable Disease Coverage, Civil Commotion

Pricing

- Insureds are coming around for their 2nd or 3rd renewal - what happened last year?
- Some underwriters are hinting that they have achieved a “balanced book”
- Insurers are competing for market share and need to grow
- Rate expectations: Rate increases that accelerated throughout 2020 have moderated in Q1 and Q2 2021

HOW TO OPTIMIZE YOUR RENEWAL

Get your S*^@ together!

Hire a 3rd party loss control firm to do inspections well in advance

Get to work on your values – figure out pandemic influenced Business Interruption

Start the marketing process early

Socialize your risk with underwriters

Underwriter submission count is up *400%*

Things take more time now

Be Technical

Models rule the day – know how to maximize their use

Address loss control recommendations

Challenge the Market

Deconstruct your program

New Structures

Alternative Retentions

Differentiate your Risk

Make yours the one they pull from the pile

Target a select group of markets vs a shot gun approach

Experienced Brokers doing old fashioned Broking!

QUESTIONS?

Thank You

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