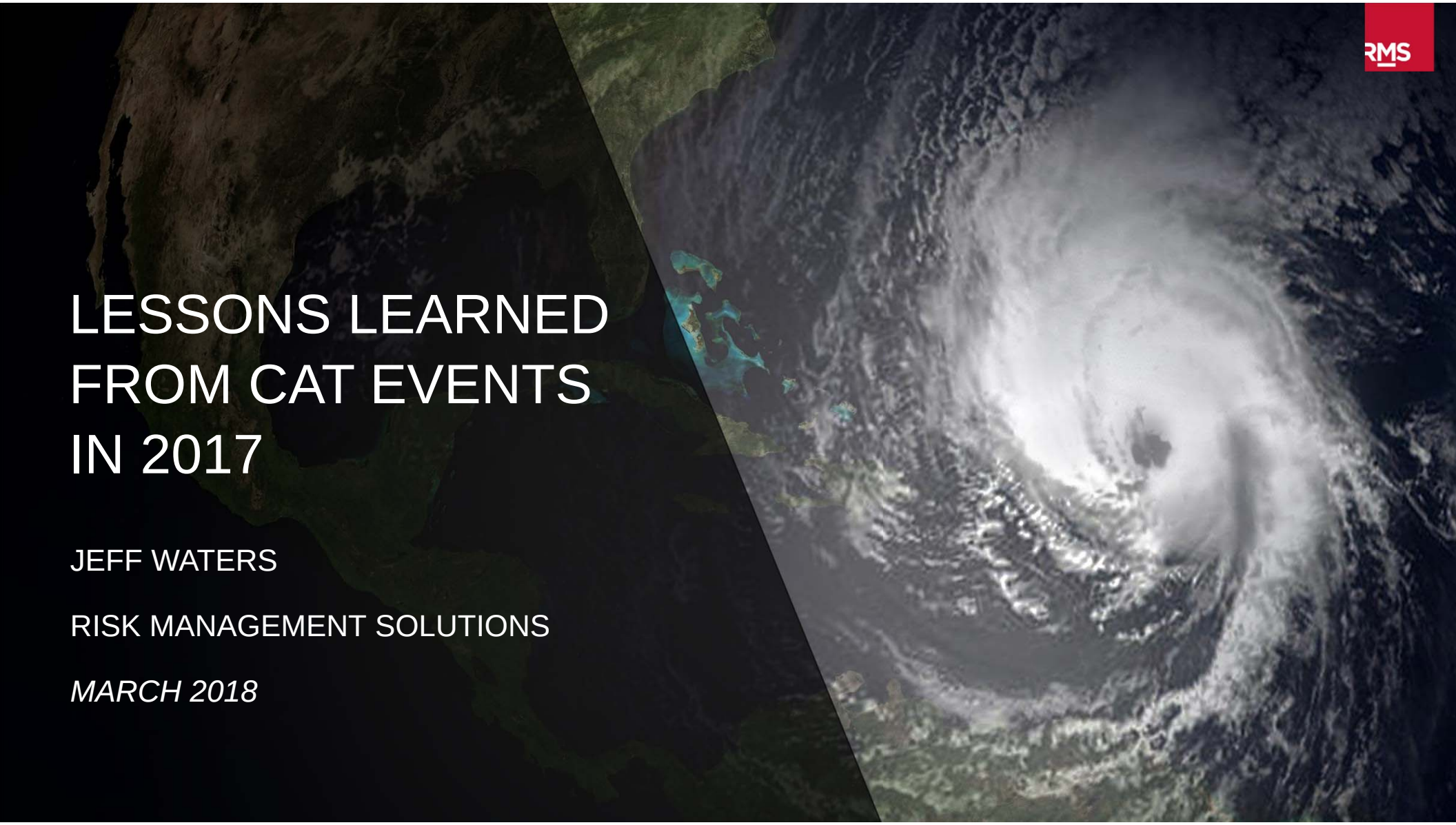


LESSONS LEARNED FROM CAT EVENTS IN 2017

JEFF WATERS

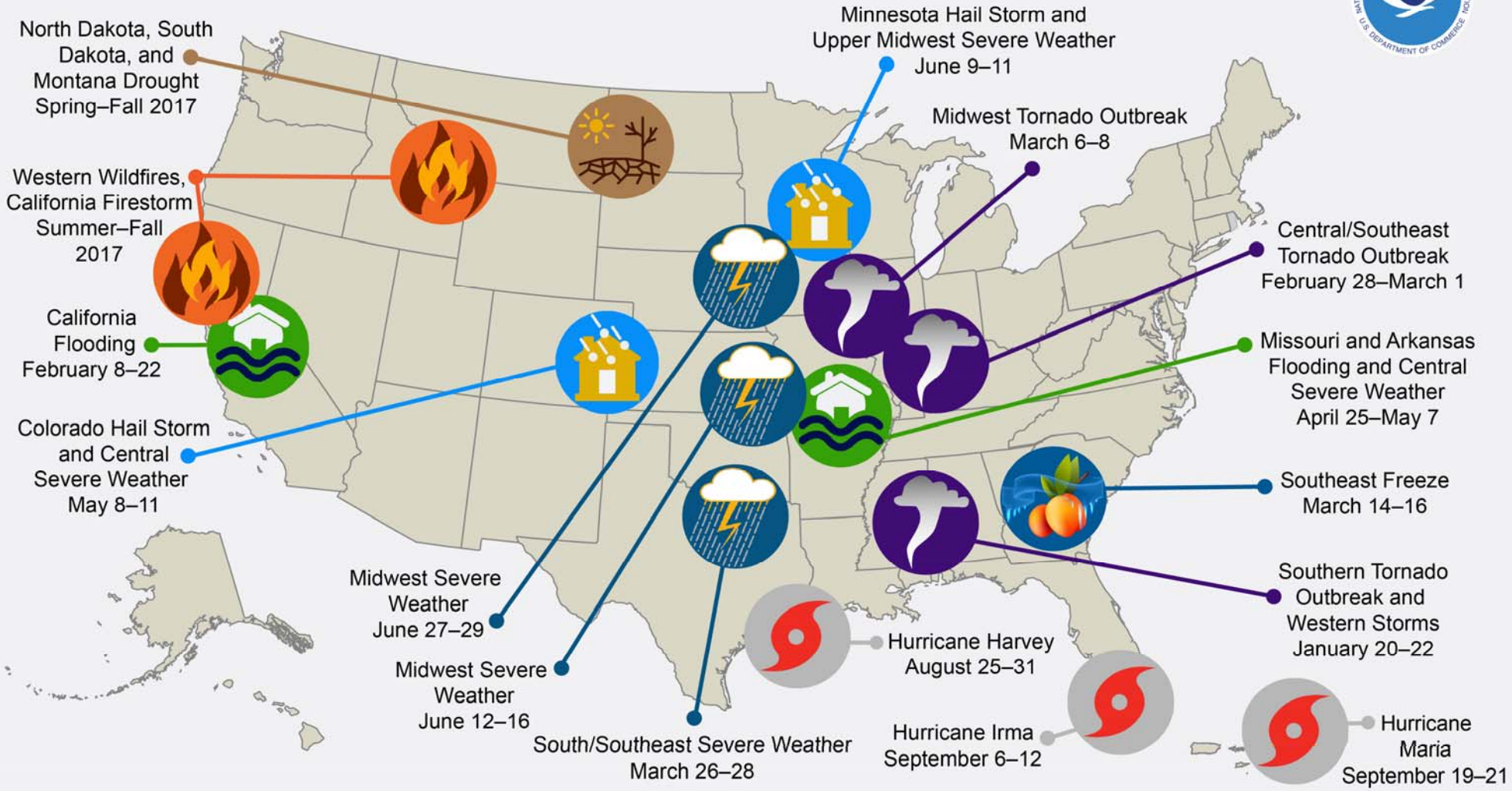
RISK MANAGEMENT SOLUTIONS

MARCH 2018

KEY THEMES AND TAKEAWAYS

1. No one event or peril is to blame
2. Despite being impacted by over $130 billion in insured losses globally (50% in the U.S. alone), much of the market was well-positioned to handle these events
3. Highlighted the need for better analytics to help insurers manage and price cat risk for wildfire and flood perils
4. Renewed focus on event response practices
5. The importance of understanding what's behind a number in a cat model
6. Increasing need to expand private market involvement with flood
7. Every real-time event is a validation and learning opportunity for cat models

U.S. 2017 Billion-Dollar Weather and Climate Disasters



*This map denotes the approximate location for each of the **16 billion-dollar weather and climate disasters** that impacted the United States **during 2017**.*

SEVERE CONVECTIVE STORMS

>$10B

10th consecutive year U.S. insured losses from severe convective storms exceeded $10 billion

>70%

Percentage of 2017 PCS SCS events causing less than $1 billion in insured losses

Sources: Artemis (top), PCS (bottom), Denver Post (right)

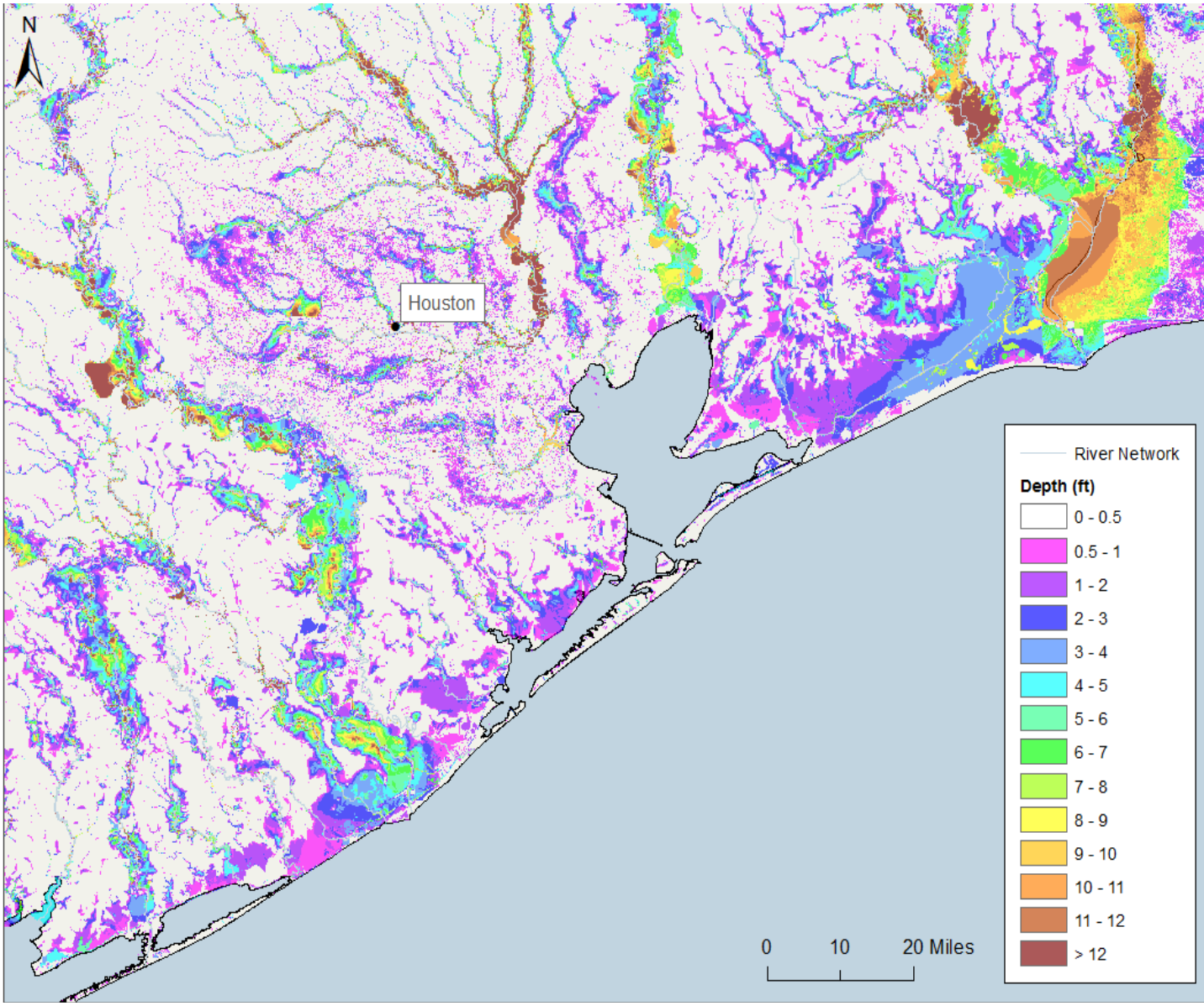
HURRICANE HARVEY

$22.5-39.5B

RMS U.S. Industry Insured Loss Estimate

1000-yr

Approximate return period for modeled Harvey inland flood losses in Texas



Sources: RMS