

Department of Financial Regulation  
Michael S. Pieciak, Commissioner

## How Insurance Rates Are Affected by Climate Change

**House Committee on Energy and Technology**

*Rep. Timothy Briglin, Chair*

*Rep. Laura Sibilio, Vice Chair*

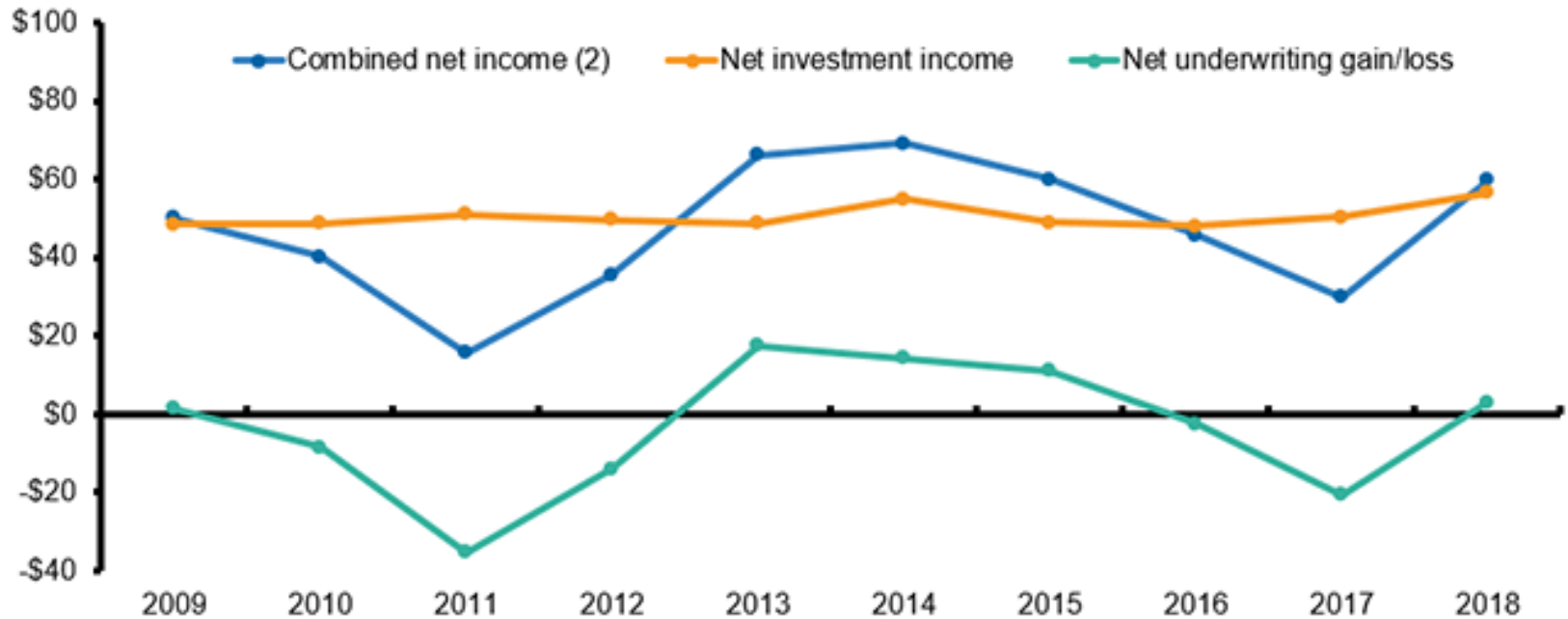
January 30, 2020



# Insurance Basics: Underwriting

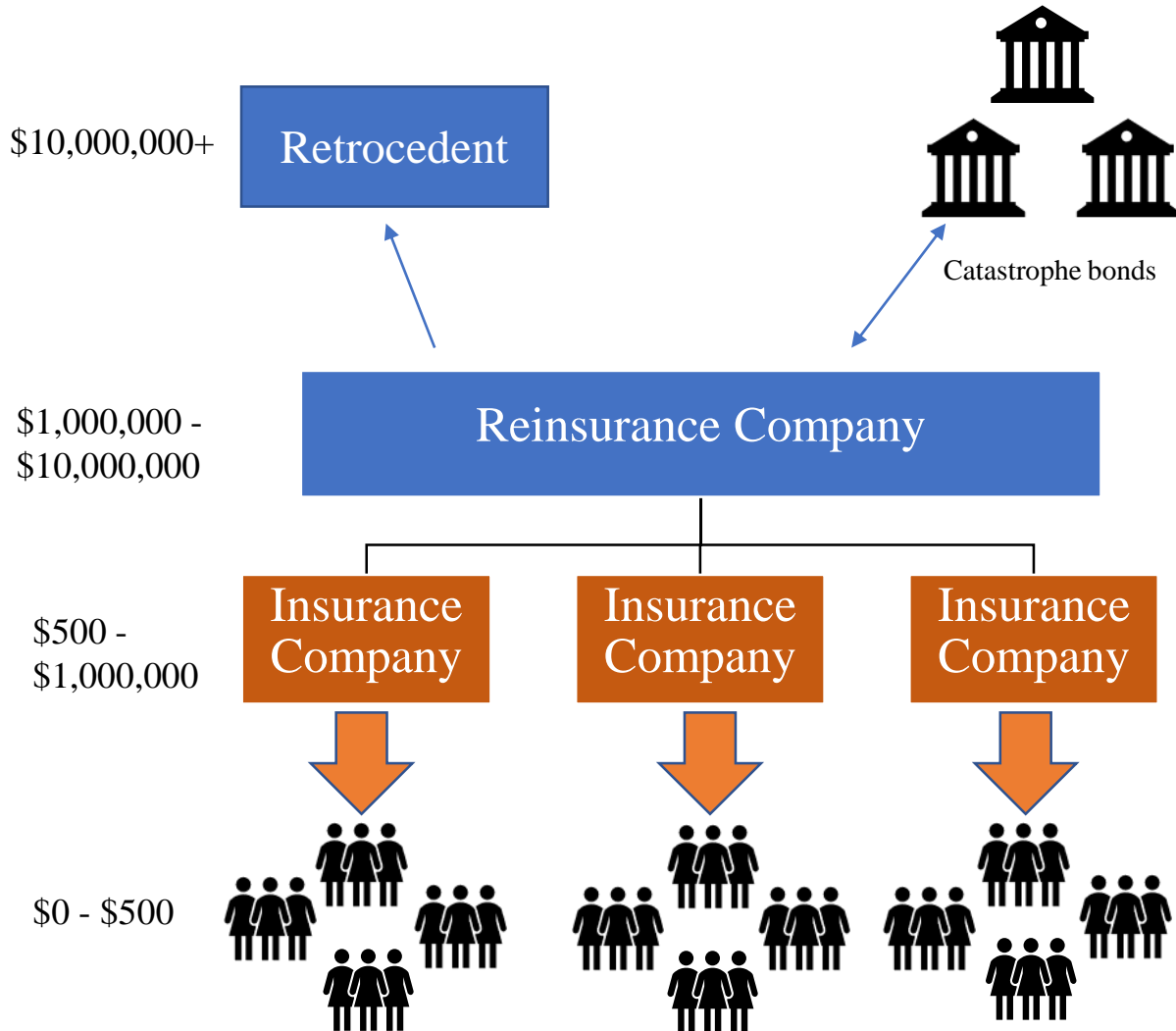
- Underwriters evaluate insurance applications to determine the risk involved and then decide whether to accept, under the appropriate terms and premium, or reject the application
- Underwriters follow a company's underwriting guidelines to make these determinations. For example, an insurance company might:
  - Not offer insurance to a person who has large amounts of clutter in their home, including in the kitchen area and around the water heater
  - Cancel a person's insurance if that person has more than 1 non-weather related claim in 3 years
  - Cancel a person's insurance for a second home if that person does not live in the second home at least once every 30 days
- Many different risk factors often considered, but generally an insured's loss history in combination with group data and modeling are important considerations

# Insurance Basics: Underwriting and Investment Gains & Losses



Source: NAIC data, sourced from S&P Global Market Intelligence, Insurance Information Institute.

# Insurance Basics: Direct Writings vs. Reinsurance



## VERMONT IMPACT Middlebury Co-operative Insurance Companies

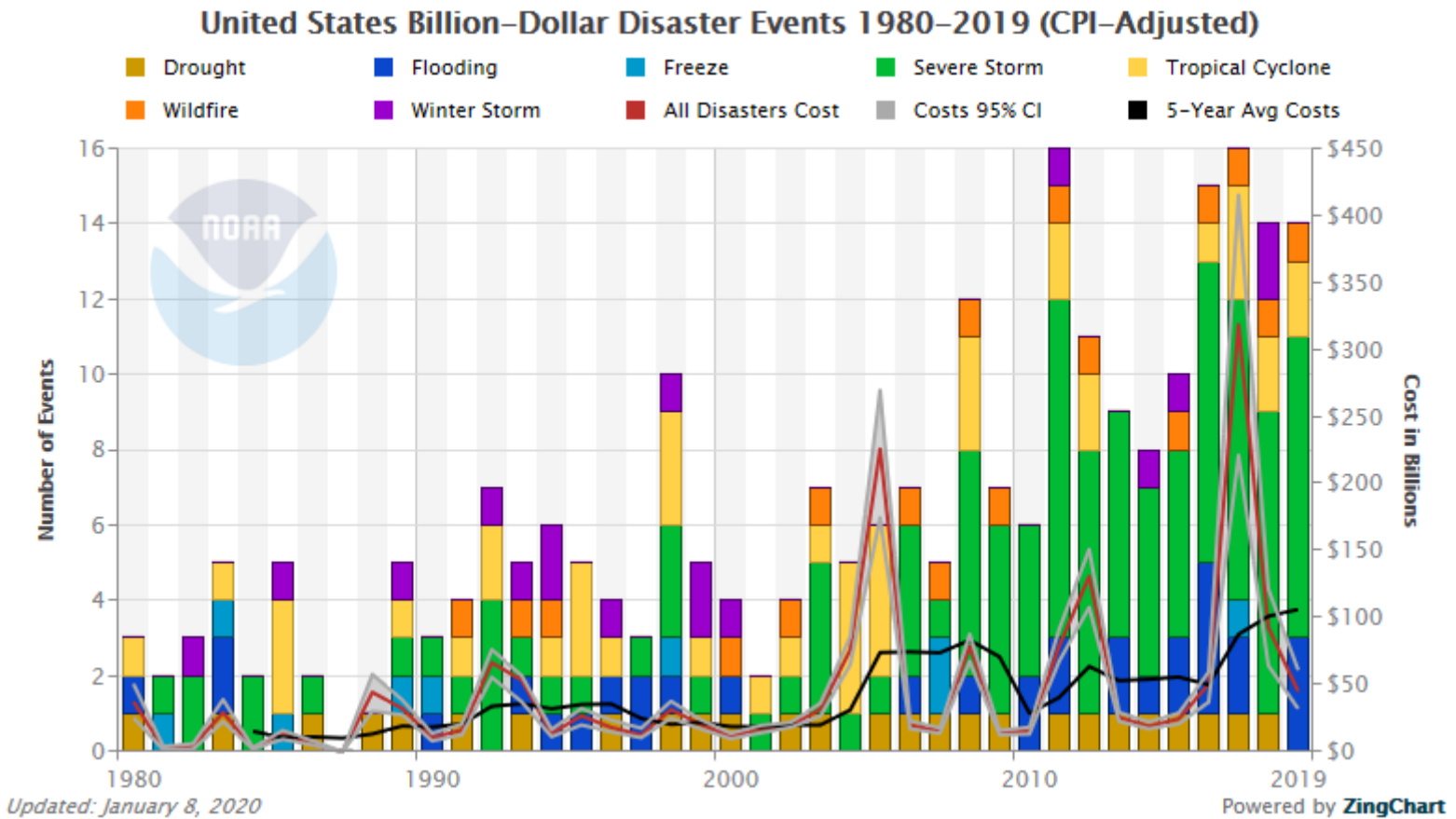
2017 Annual Report:

On October 29 and 30, we experienced our worst weather-related event in almost 70 years, with wind roaring through our states. We had over 1000 claims and approximately \$5.8 million incurred losses from the storm. Our reinsurance coverage for this catastrophic event helped smooth over results for the year.

# Climate Change and Insurance

- Insurance industry has been focused on climate change for decades
- United States is experiencing an increased frequency of severe weather events
- However - that is not necessarily translating into a similar increase in insured losses

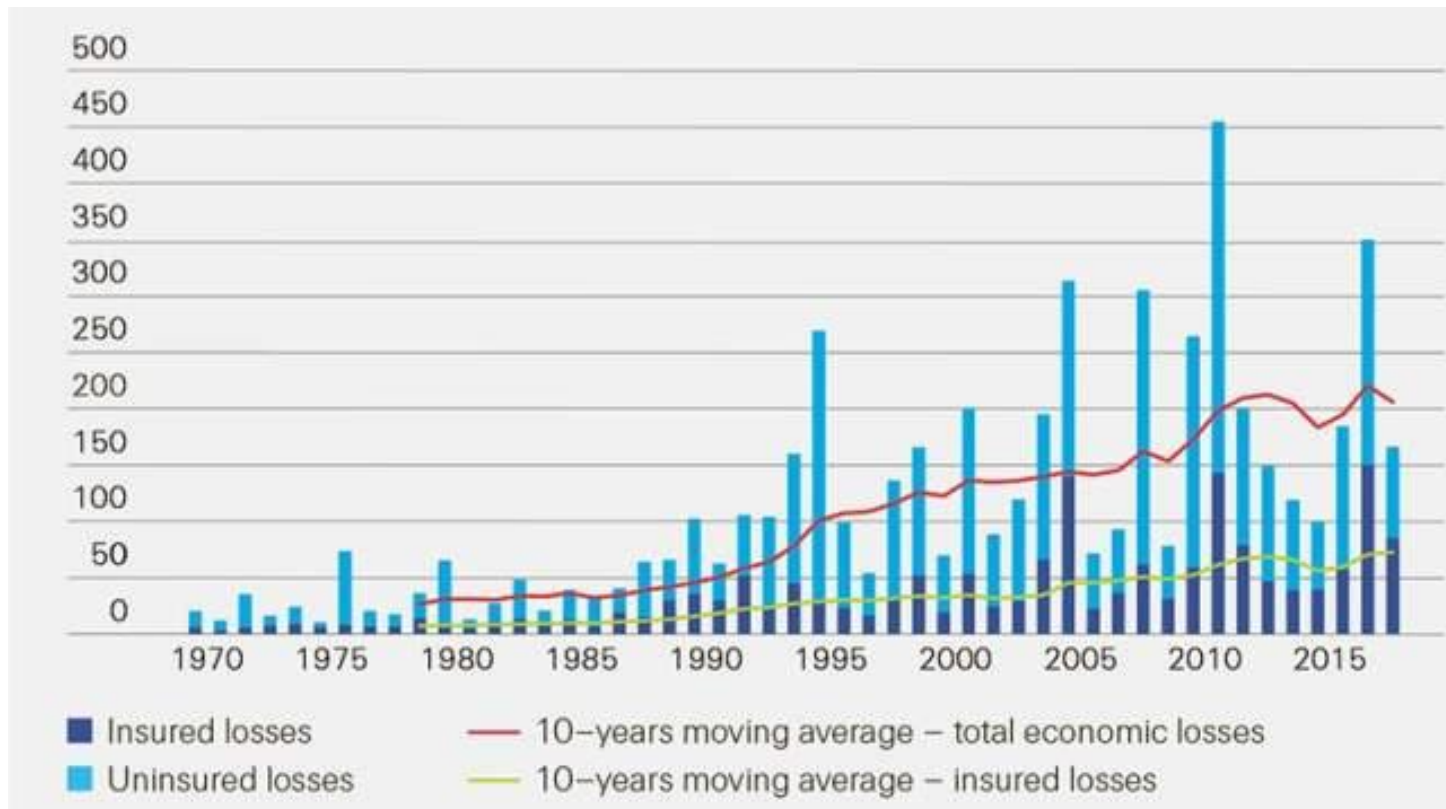
# Climate Change and Insurance



Source: National Oceanic and Atmospheric Administration

# Climate Change and Insurance

Insured Losses vs. Total Economic Losses (1970-2017)



Source: SwissRe

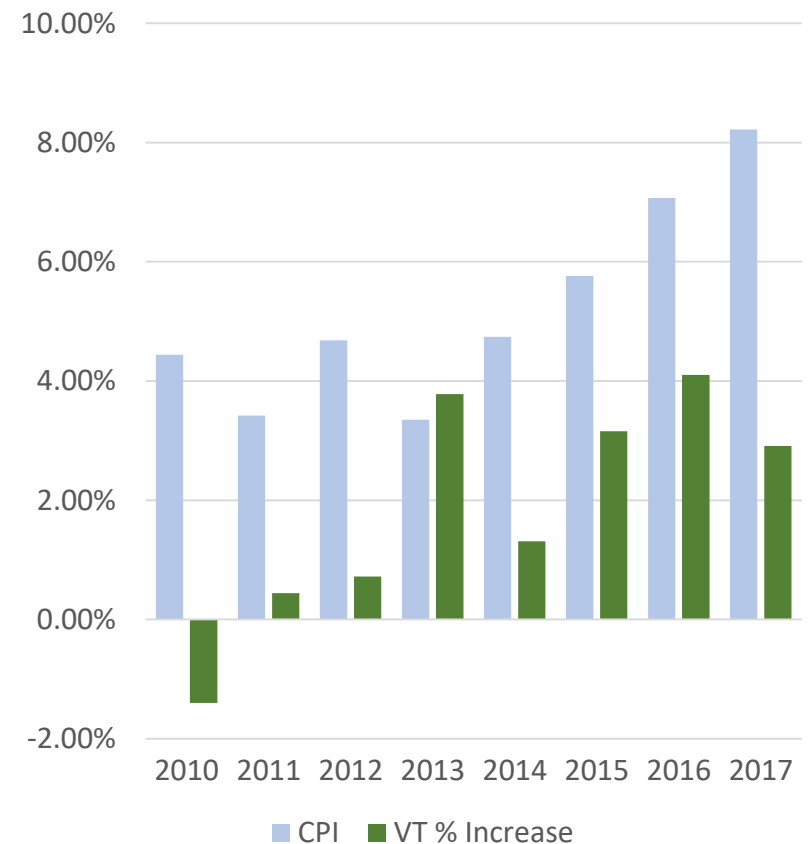
# Vermont Auto Insurance Trends

2010 to 2017

### Vermont Average Premium



### VT Increases Compared to CPI

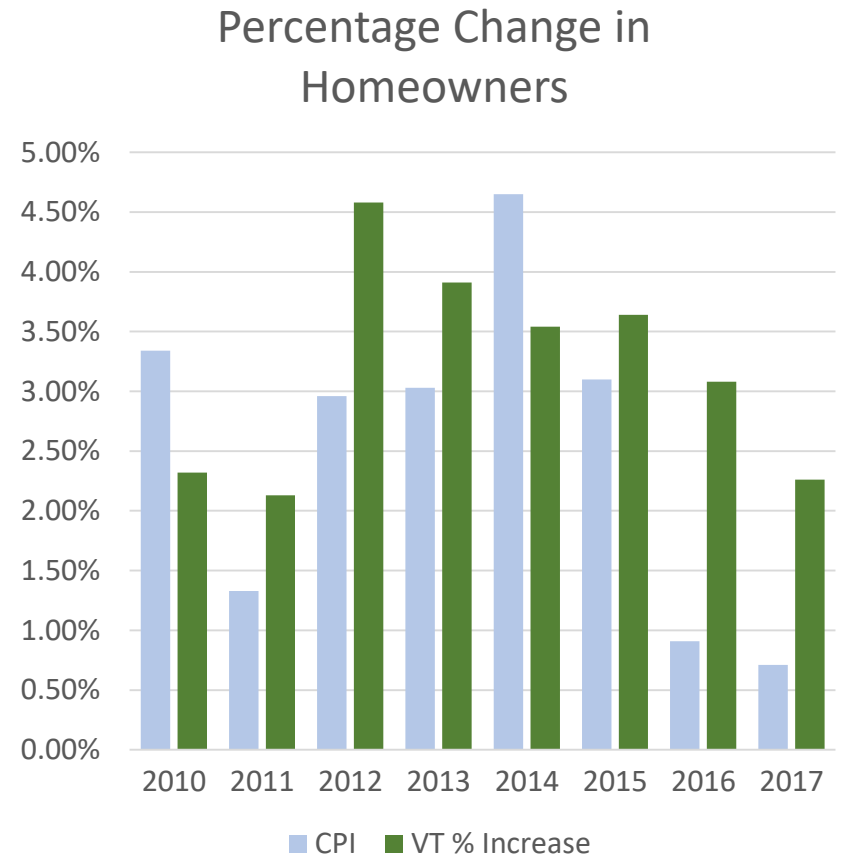
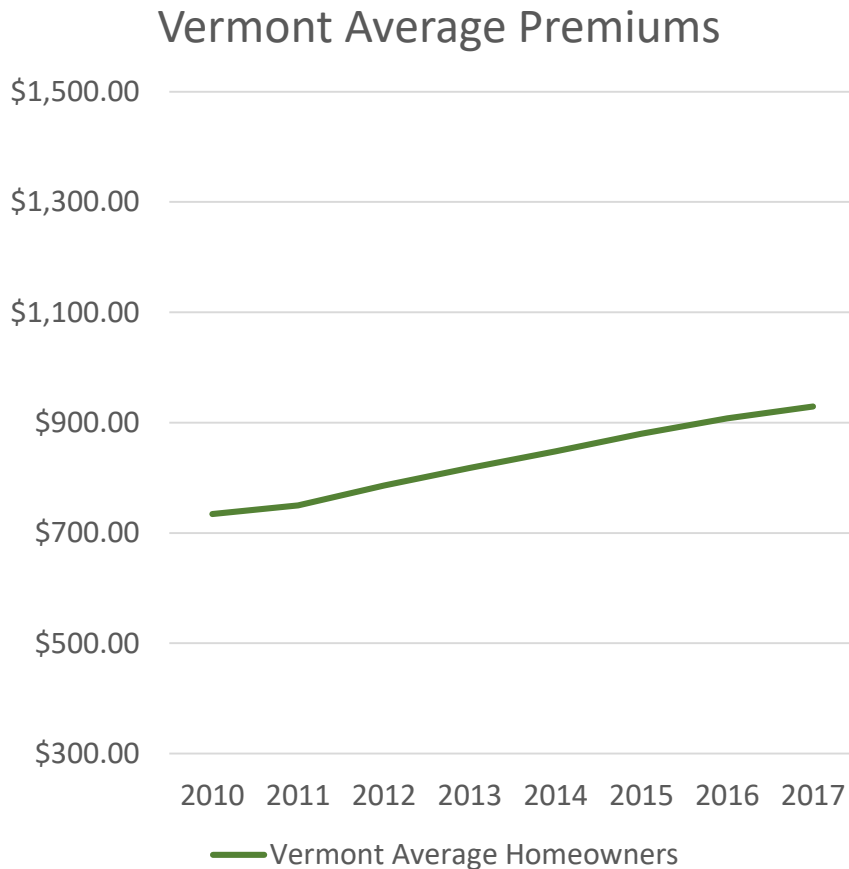


Source: National Association of Insurance Commissioners



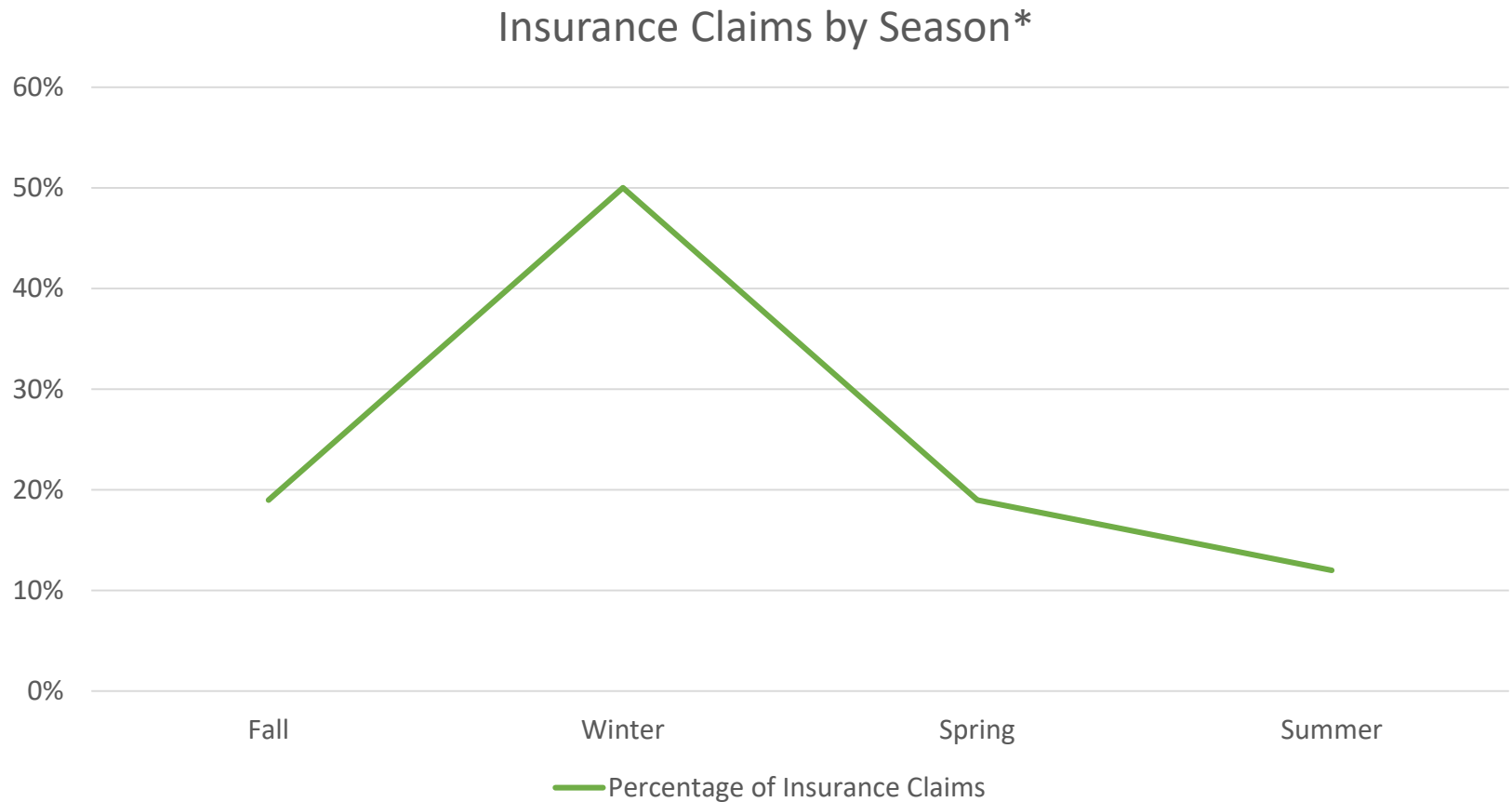
# Vermont Homeowner Insurance Trends

## 2010 to 2017



Source: National Association of Insurance Commissioners

# Most Frequent and Costly Northeast Insurance Claims: *Severe Winter Weather*



\*Note: Representative and not based on actual claims information

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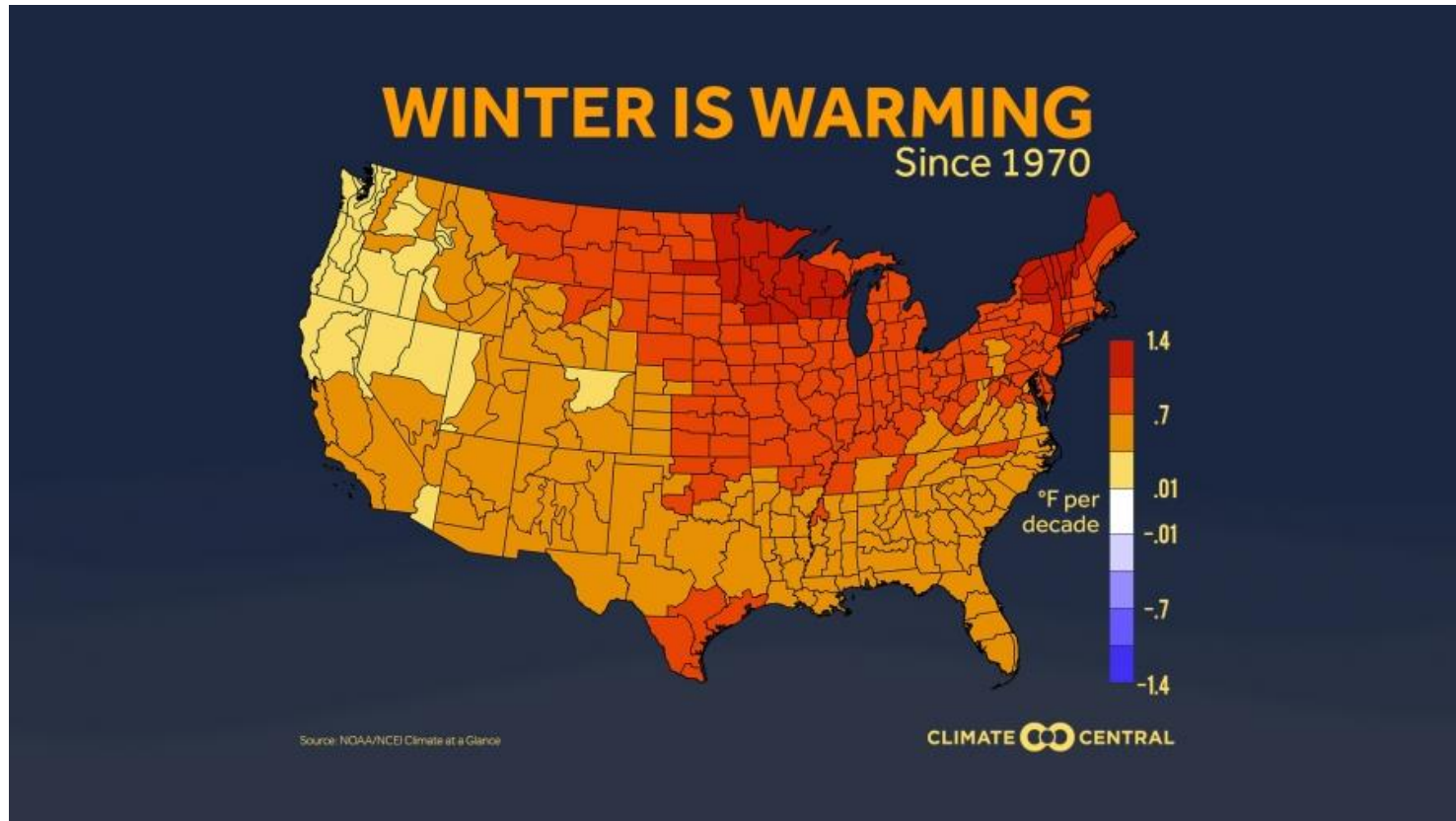
## Types of Homeowner Claims

- Cold weather lead to frozen pipes
- Dry air and increased fireplace/stove use lead to fire damage
- Snow building up on roofs lead to collapse
- Snow / ice buildup on trees & branches falling on homes
- Icy walkways lead to slip and falls
- Ice buildup in waterways lead to flooding of homes

## Types of Auto Claims

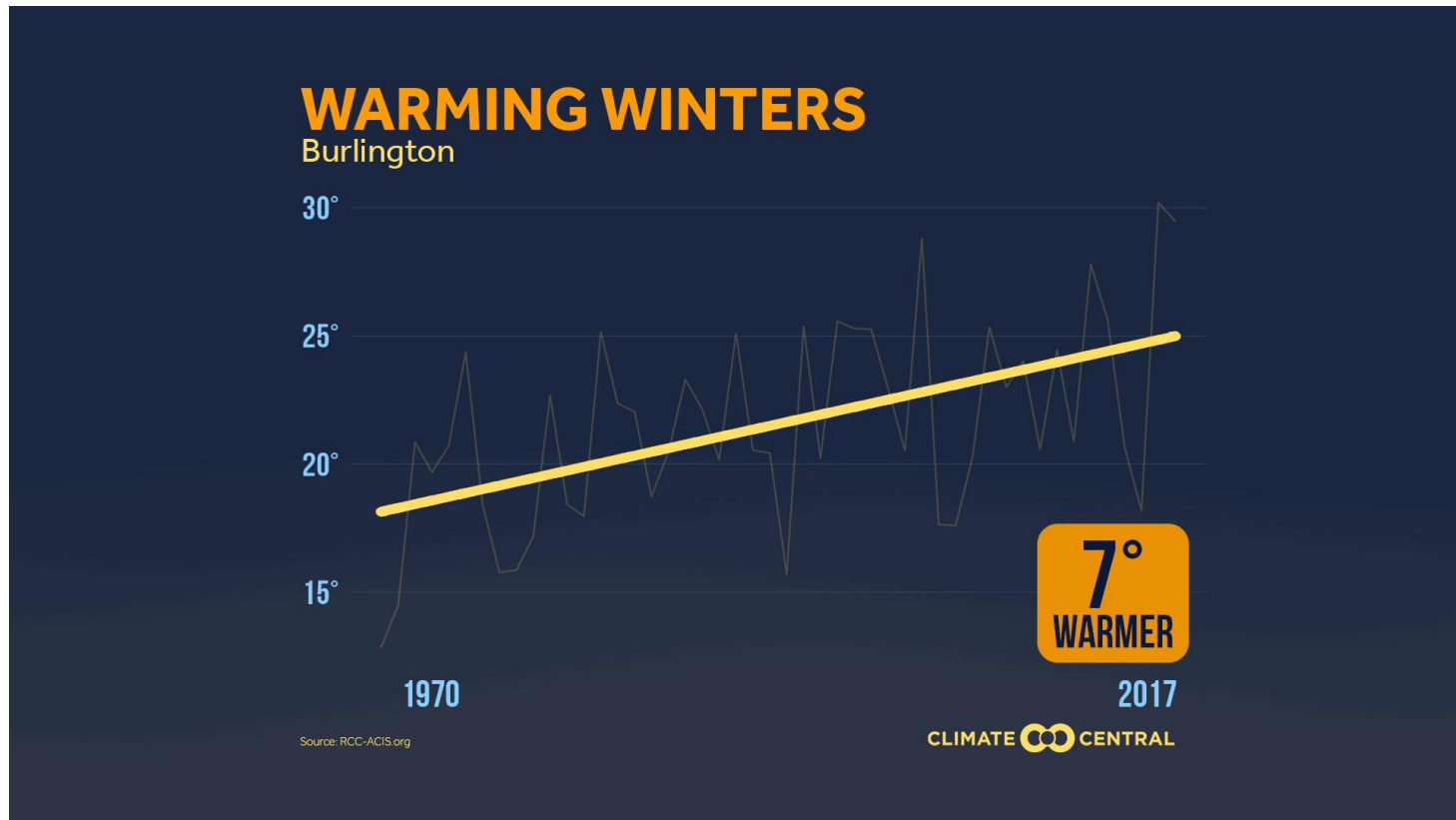
- Icy roads lead to increased frequency of accidents
- Snowstorms and snow buildup lead to decreased visibility resulting in increased frequency of accidents
- Snow / ice buildup on trees & branches falling on autos
- Ice buildup in waterways lead to flooding of homes
- Ice or snow dislodging from another vehicle lead to increased frequency of claims

# New England's Changing Climate



Source: NOAA/NCEI. Each city's winter temperature is calculated using the average temperature for December, January, and February via data from the Applied Climate Information System (ACIS)

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# Changing Weather and its Impact on Insurance

## Less

Winter related claims like:

Frozen pipes

Fires caused by fireplaces or  
woodstoves

Snow causing roofs to collapse or  
trees to fall

Flooding due to ice build up in  
water ways

## More

Flooding caused by heavy rains

Home and auto damage caused by  
severe summer storms – i.e. wind  
and hail damage

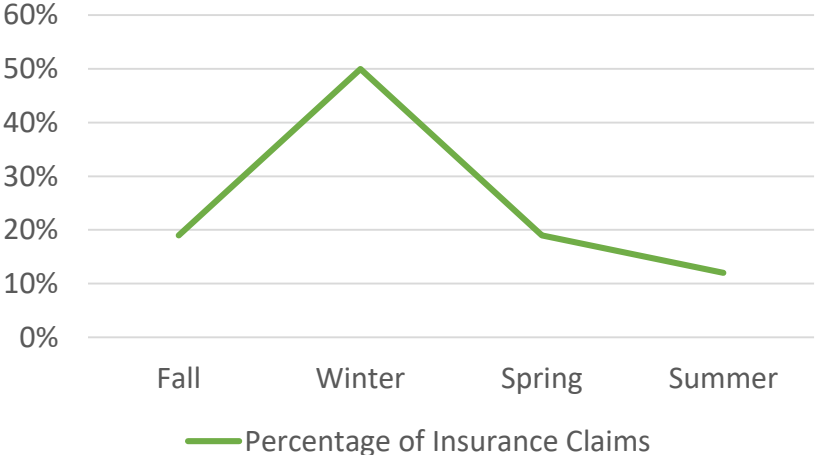
Drier summer conditions could  
lead to an increase in wildfire  
claims

Crop failures caused by heavy  
rains or non-linear weather patterns

# Changing Weather and its Impact on Insurance

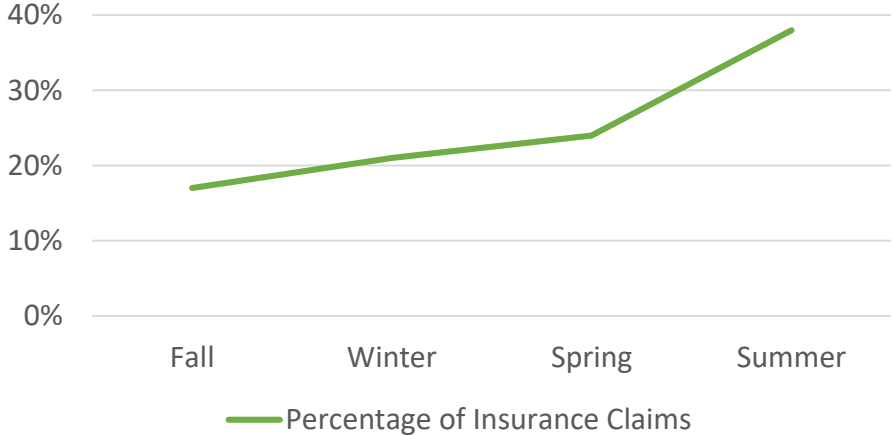
2020

Insurance Claims by Season\*



2050

Insurance Claims by Season\*



\*Note: Representative and not based on actual claims information

# Department's Work on Insurance & Climate Change

- Department is a longstanding member of the National Association of Insurance Commissioner's Climate Risk and Resilience Working Group
- Discussions underway for the Department to join the Insurance Sustainability Forum
- Department lead climate change student underway with targeted completion during forth quarter of 2020
  - *Goal: Actionable Recommendations*