



# NHC Solutions for Affordable Housing

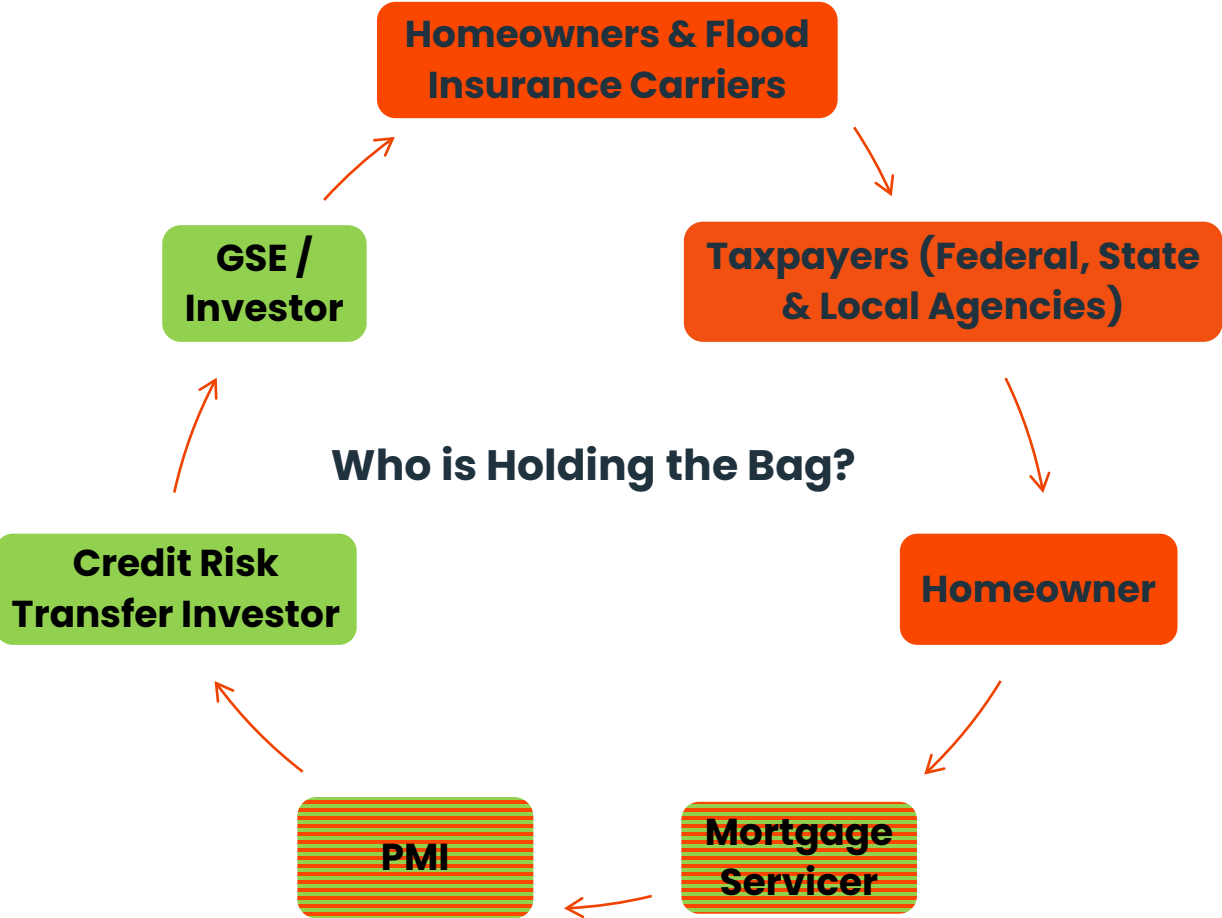
*Climate Impact: Housing  
Insurance Crisis*

*Pete Carroll*

12/7/2023

CoreLogic

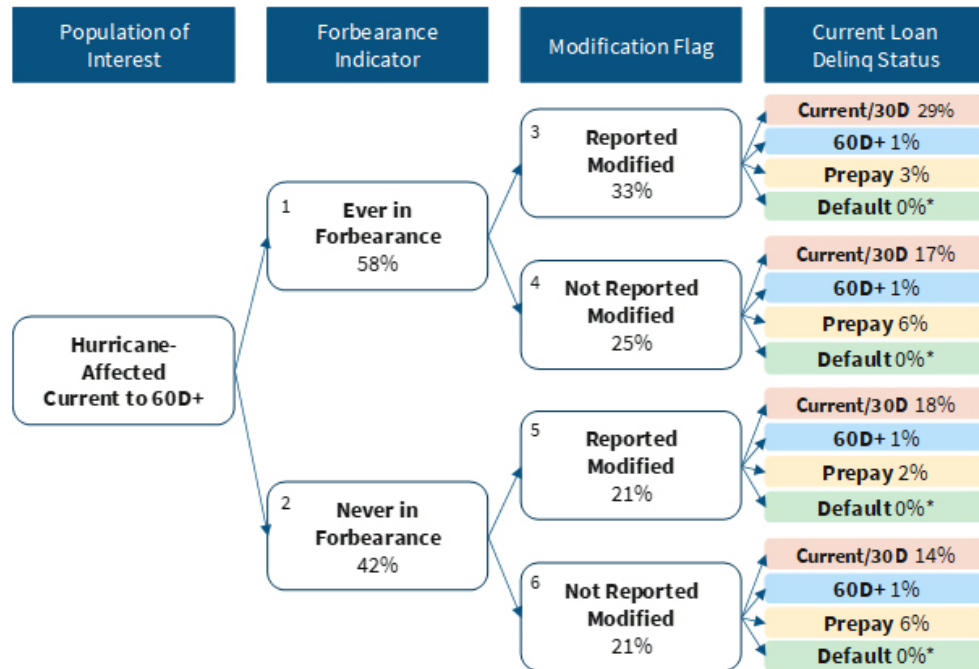
# Climate-Related Financial Risks to Mortgage Loan Performance



# The Challenge

Our housing system applies an “ex post” approach to managing natural hazard events: homeowners are provided federal, state & local aid, along with natural disaster mortgage loan forbearance or modification

**Loan Performance in 2017 Hurricane-Affected Regions (as of June 2019 Activity Period)**



Source: Fannie Mae. Numbers may not sum to 100 percent due to rounding. Values denoted with an asterisk represent non-zero amounts.



**This approach to bridging the homeowner while they get back on their feet has worked, but for how much longer?**

# Climate Risk Management: An “Ex-Ante” Strategic Framework



OAK BLUFFS, DUKES, MA 02557-0000

Policy Period From: 12/01/20 To: 12/01/21  
(12:01 A.M. standard time at location of the residence premises)

**SECTION I - COVERAGES AND AMOUNTS OF INSURANCE**

COVERAGE A - DWELLING PROTECTION	\$394,000
COVERAGE B - OTHER STRUCTURES PROTECTION	\$39,400
COVERAGE C - PERSONAL PROPERTY PROTECTION	\$197,000
COVERAGE D - LOSS OF USE PROTECTION (UP TO 12 MONTHS)	\$78,800

**SECTION II - COVERAGES AND LIMITS OF LIABILITY**

Personal Liability - Each Occurrence	\$300,000
Medical Payments to Others	\$5,000

Managing  
What You  
Measure

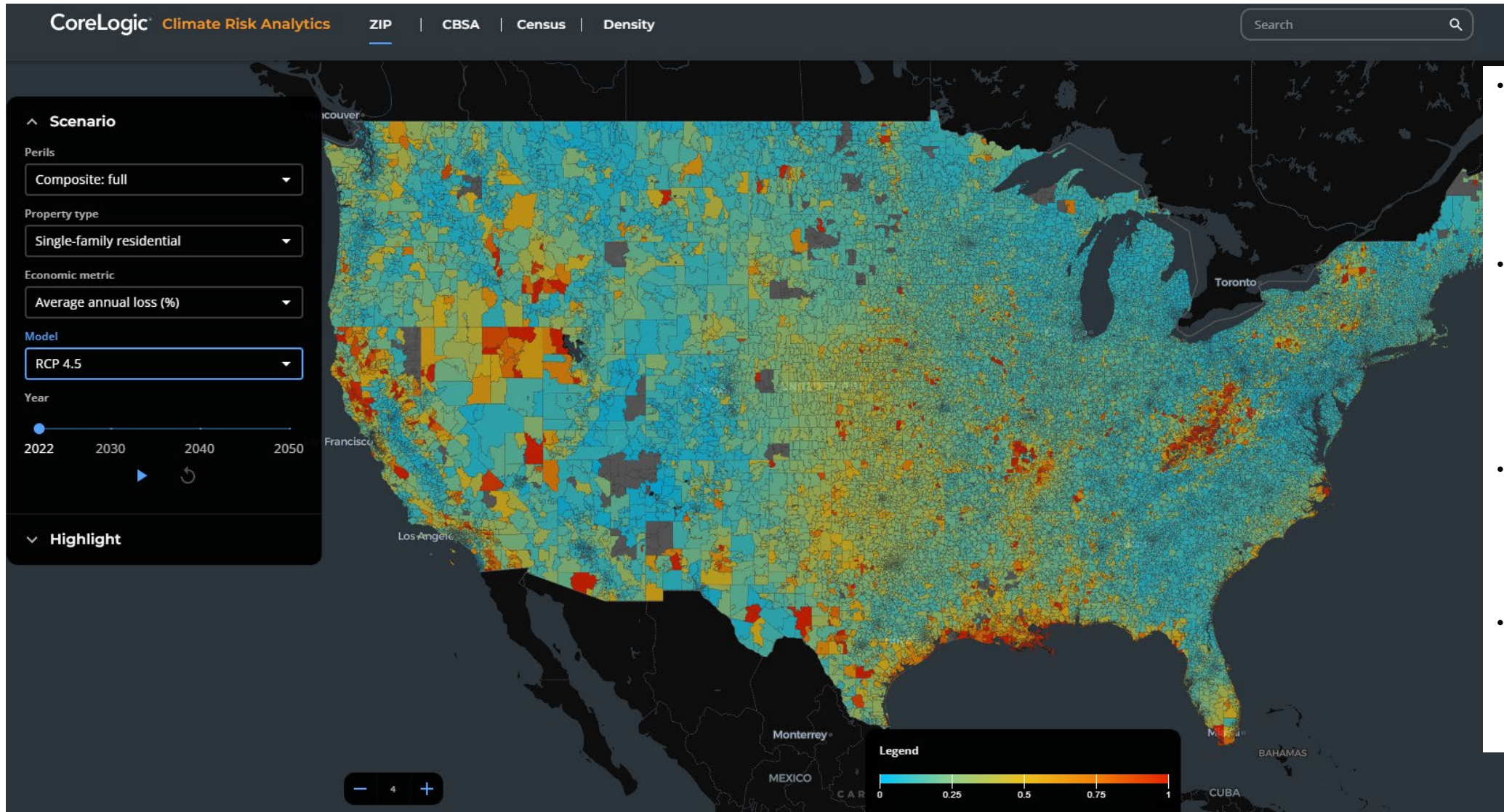
Resiliency  
Cornerstones

Consumer  
Disclosure

Risk  
Management

**Recent homeowners insurance premium increases are a “canary in the coal mine,” driving housing professionals to ask the tough questions about climate risks to homes**

# Managing What You Measure



- SFR, property-level forecast of average annual losses due to range of natural hazards, aggregated to the zip code-level, and displayed nationally
- Spans the top-9 most common natural hazards, including hurricane-driven wind, rain and storm surge, wildfire, severe convective storms, earthquake, inland flooding, and winter storms
- Defaults to current risk to properties, though can slide forward up to 30-years to observe risk profile changes over time
- Four climate change scenarios in the forward forecast:\* 1) No change, 2) Light increase, 3) Moderate increase, 4) Heavy increase

## Best Practices in Modeling Climate-Related Financial Risk to Homes

# Resiliency Cornerstones

## Building Incentives and Hurricane Ian (2022)



Flood extent of the Peace River in Arcadia, Florida



Federal incentives prohibited SFHA development



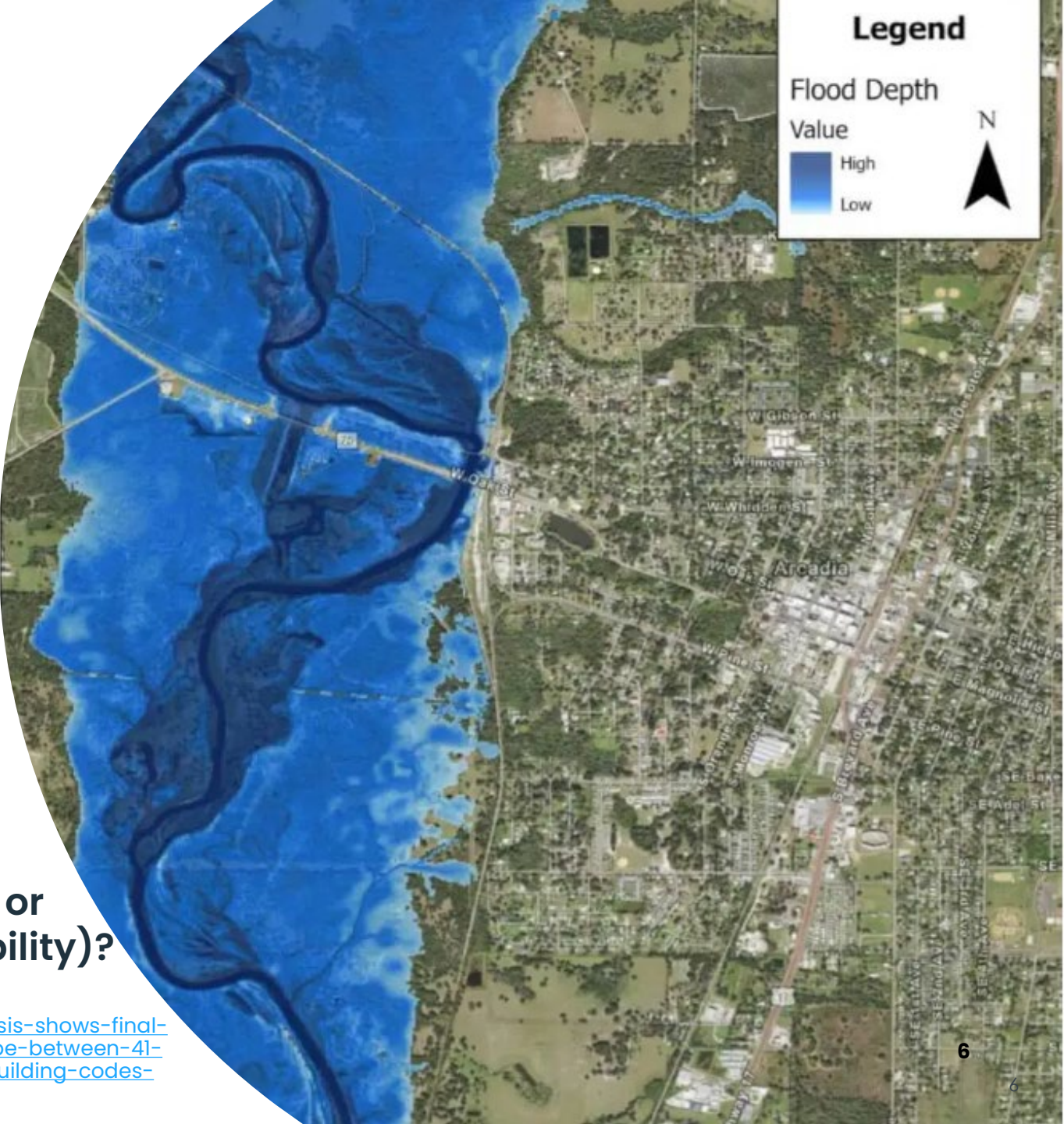
Helped contain uninsured flood losses to ~\$10B-\$17B (out of ~\$41B-\$70B total)



Stronger building codes are correlated with lower, post-event mortgage borrower delinquency

What if we more subtly adapted building codes or incentives to reduce dead weight loss (affordability)?

Sources: <https://www.corelogic.com/press-releases/corelogic-analysis-shows-final-estimated-insured-and-uninsured-damages-for-hurricane-ian-to-be-between-41-billion-and-70-billion/> and <https://www.corelogic.com/intelligence/building-codes-impact-mortgage-delinquency/>

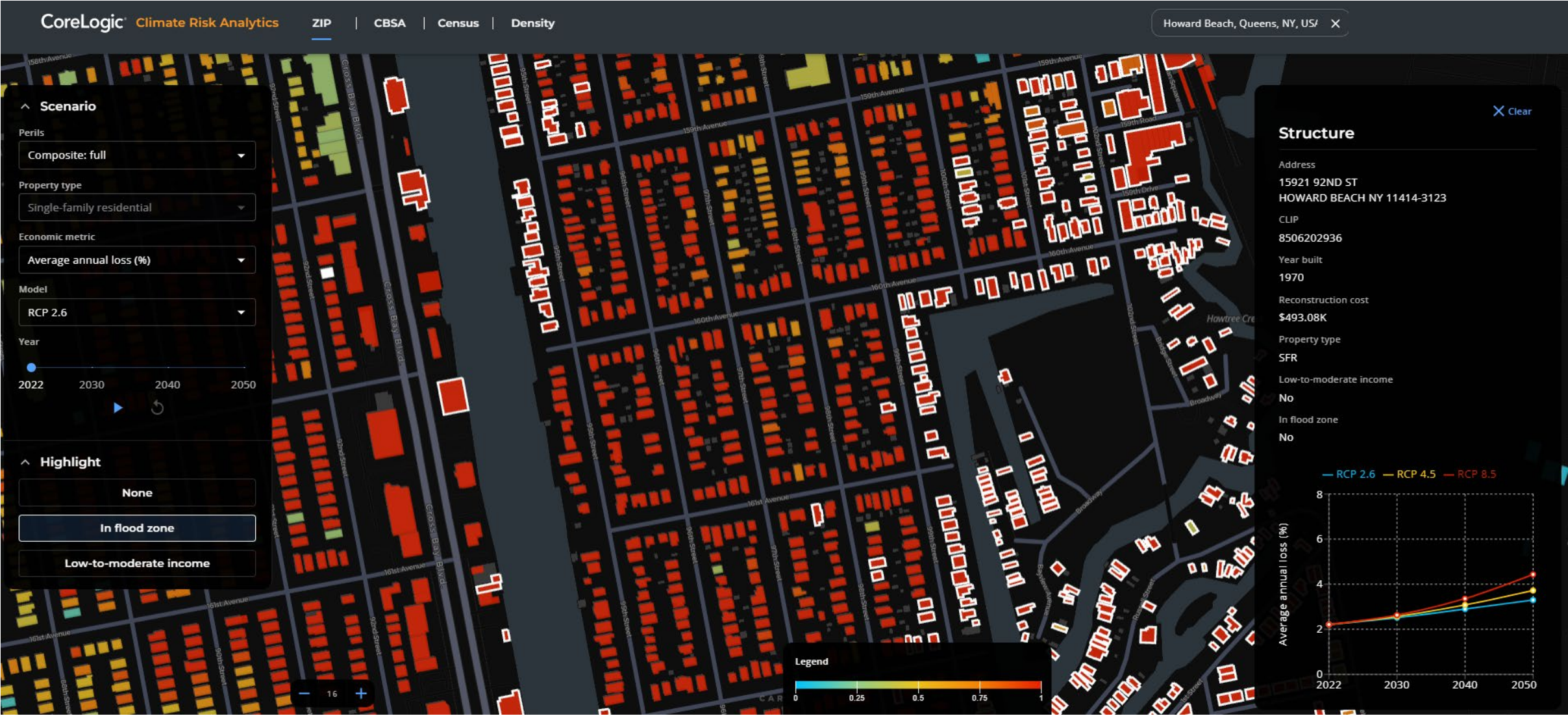


# Consumer Disclosure – Audience Poll

- Would you buy a \$300,000 home if it was your “move-in-ready-dream home?”
- What if your Realtor disclosed to you that the home was damaged by a hurricane 2 years ago?
- What if your Realtor could reliably tell you:
  - How risk-prone the property is to hurricane-based damages?
  - What retrofits would ensure the home is more resilient to future events?
  - Their costs and affordable grants & financing mechanisms available?

**Different disclosures have different cost/benefit trade-offs**

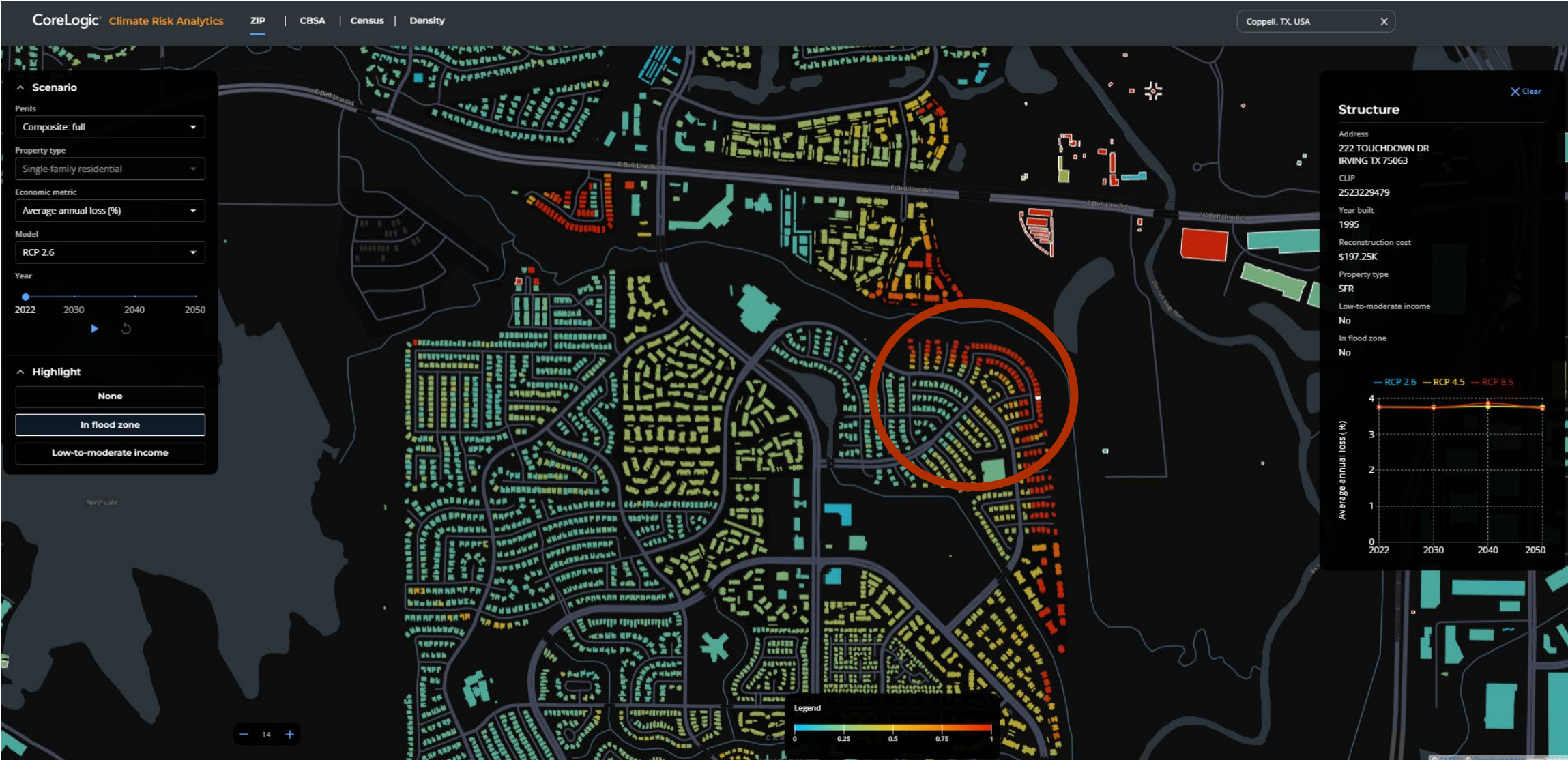
# Risk Management



High climate risks posed to homes outside the Special Flood Hazard Area (SFHA)



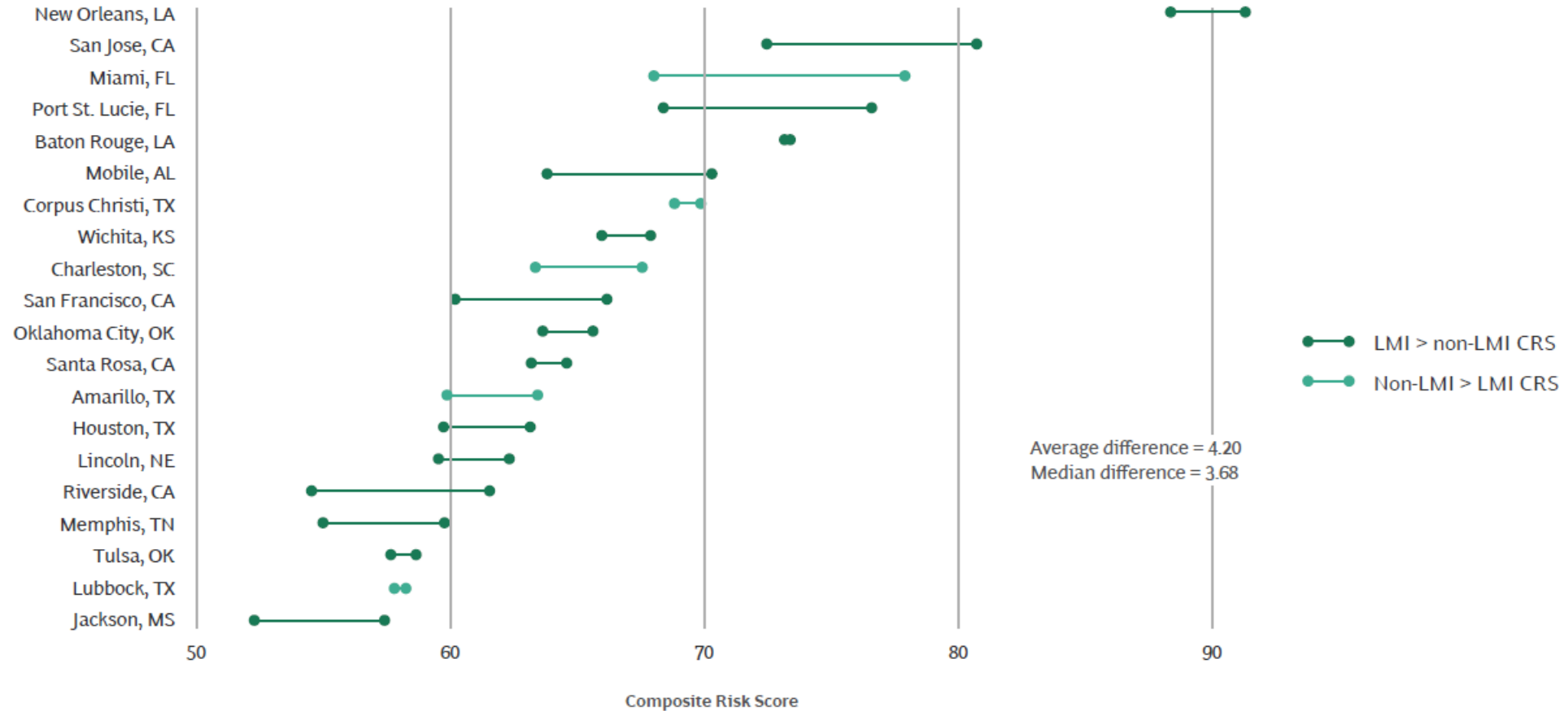
# Risk Management



Adjacent homes can have radically different climate risk profiles, regardless of SFHA

# Risk Management

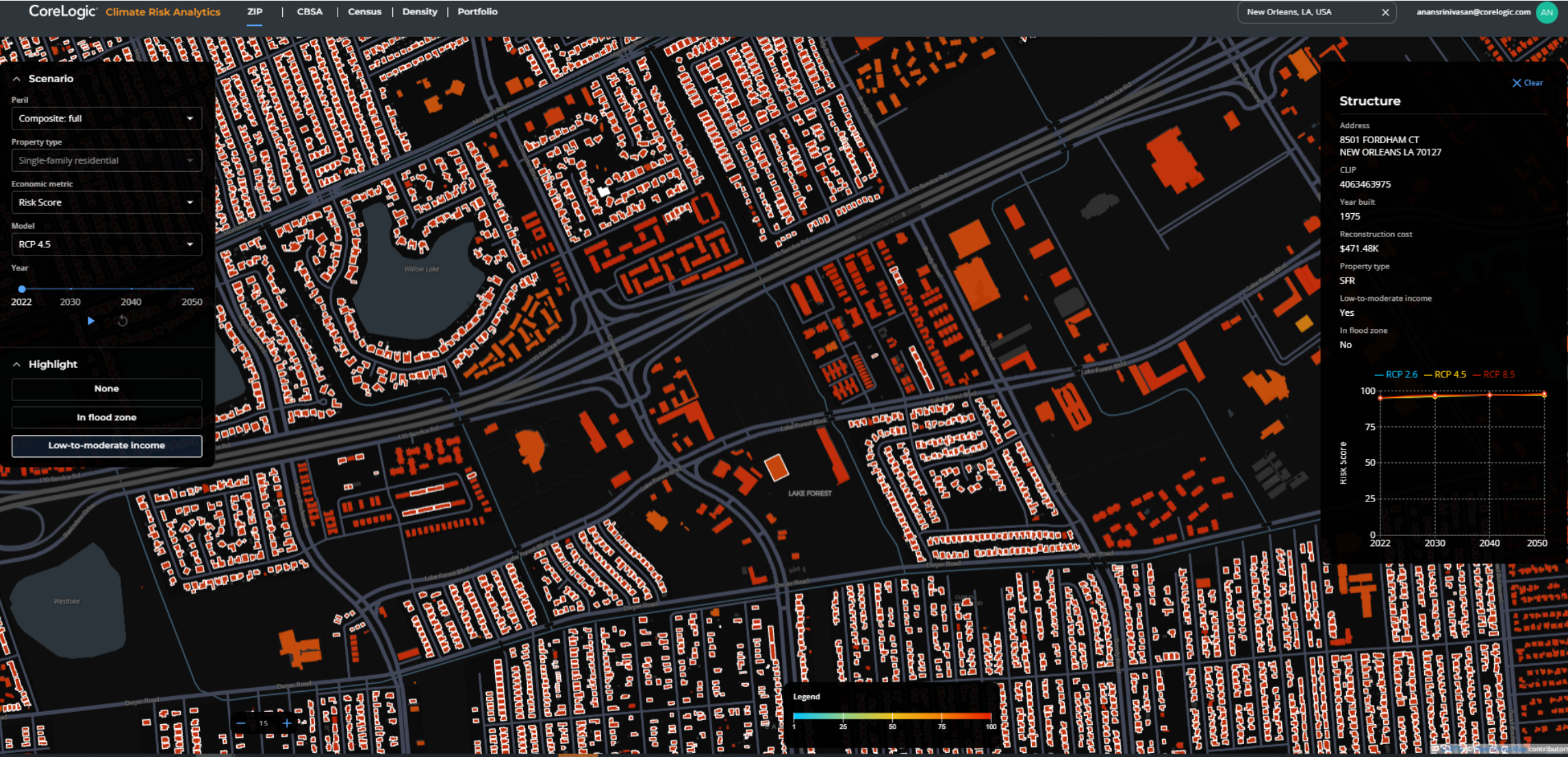
City (descending by overall CRS)



Source: CoreLogic; Composite Risk Score is a metric that represents aggregate climate risk across nine major perils, inclusive of the after-effects of earthquakes such as tsunamis and fire following; Data presented here are for CBSAs; Projections based on RCP 4.5 scenario for year 2050

**Families living in LMI census tracts have disproportionately higher climate risk exposure**

# Risk Management



**Families living in LMI census tracts have disproportionately higher climate risk exposure**