

FEDERALLY FUNDED SCIENCE SUPPORTS HOMEOWNERS AND BUILDERS

IMPACTS AT A GLANCE



SCIENCE PROTECTS HOUSING INVESTMENTS

Housing, real estate, and insurance are central to household wealth, local tax bases, community stability, and long-term economic growth. In June 2025, the total value of U.S. homes exceeded \$55 trillion. The real estate, rental, construction, and brokerage markets together contributed about 18% of U.S. GDP in 2023. This enormous sector depends on trusted public data. Federally funded science helps determine where it is safe to build, how to price and insure risk, how to protect existing assets from floods, fires, hurricanes, heat, and hail, and how to plan infrastructure and development for the future.

PLANNING FOR HOUSING REQUIRES COMPLEX TOOLS

Federal science support for this sector is robust and nuanced. NOAA, FEMA, NASA, NSF NCAR, and USGCRP provide the observations, models, maps, archives, and decision tools that help developers, insurers, engineers, surveyors, lenders, and property owners understand risk before it becomes loss. This includes flood maps and flood risk tools, satellite observations, storm archives, near-real-time environmental monitoring, wildfire smoke and air quality research, and long-range climate projections that inform design standards and investment decisions. Federal science helps markets function by reducing uncertainty, improving pricing, and guiding smarter development before damage occurs.



2+ million direct employees in real estate, rental, and leasing, and another **14+ million jobs** in broader commercial real estate ecosystem



148 million total housing units in the United States



\$55+ trillion in total value of U.S. homes



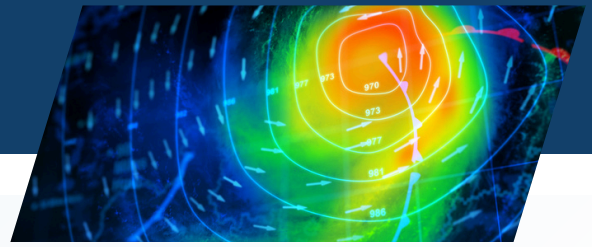
44.8% of U.S. Homes face at least one severe weather risk



\$180 billion in damages from **27 weather disasters** in 2024

**AMERICANS ARE MORE SECURE, COMPETITIVE, AND
PROSPEROUS BECAUSE OF REASONABLE AND MEANINGFUL
INVESTMENTS IN FEDERAL EARTH SCIENCE AND WEATHER
INTELLIGENCE**

WHAT FEDERAL SCIENCE DELIVERS FOR HOMEOWNERS AND BUILDERS



NOAA

NOAA helps to answer what is happening now, what has happened before, and what is likely to happen next. Its satellites, research labs, climate data archives, and hazard-focused systems help track hurricanes, flooding, wildfire smoke, air quality, heat, and severe storms. GOES satellites provide near-real-time monitoring; the National Centers for Environmental Information is used by engineers, insurers, and planners; Climate Data Records support long-term risk assessment; and its research labs improve flood forecasting, atmospheric river science, flash flood prediction, wildfire smoke forecasting, and climate modeling. The National Integrated Flood Information System and related coastal and flood research help communities update planning in places where older flood assumptions are outdated.

NASA

NASA turns planetary-scale observations into local insights. NASA contributes the Earth observation and modeling capabilities that help the sector understand land, water, heat, and environmental changes. Through NASA's Goddard Space Flight Center and related programs, NASA collects satellite data on precipitation, land use, topography, sea level, aerosols, and surface change. Landsat, ICESat-2, GPM, and PACE help researchers and downstream users understand flooding, coastal erosion, urban heat, air quality, and changing conditions that impact how communities build. NASA also makes this data widely accessible through the Earth Observing System Data and Information System (EOSDIS) and provides downscaled climate products such as NASA Earth Exchange projections that are relevant to local and regional planning.

NSF NCAR

The National Science Foundation supports NCAR, which provides advanced weather models, large public data archives, and research tools that improve understanding of extreme events and long-term environmental change. NCAR's models help researchers explore how broad climate trends affect regional weather, precipitation, flooding, and other conditions relevant to buildings, infrastructure, utilities, and insured assets. NCAR also maintains public data resources that allow government, academia, and private industry to analyze extremes and trends. For housing and insurance, this work underpins better long-range planning: stronger assumptions about future rainfall, heat, storm behavior, and other variables lead to better engineering, underwriting, and capital allocation decisions.

WHAT'S MISSING?

UUSGCRP – The U.S. Global Change Research Program helped turn complex federal science into decision-relevant products for long-term risk management. Its National Climate Assessment synthesizes extreme weather risks across regions and sectors, while the U.S. Climate Resilience Toolkit helped public and private decision makers understand exposure, assess vulnerability, compare options, and plan adaptation. USGCRP was eliminated in 2025 but its purpose and mission remain vital to many parts of the U.S. economy, and in particular, real estate.

WANT TO GET INVOLVED?



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