



LOSS PREVENTION BY THE NUMBERS

Natural catastrophe-related U.S. property losses from 1988 to 2007 (adjusted to 2007 dollars), according to the Insurance Services Office and the Insurance Information Institute:

• Hurricanes and other Tropical Storms	\$141.6 billion
• Tornadoes	\$82.4 billion
• Snow Storms	\$24.4 billion
• Earthquakes	\$19.5 billion
• Hail, High Winds and Flooding (excluding losses covered by NFIP)	\$9.9 billion
• Wildfires	\$8.1 billion
• TOTAL LOSSES	\$285.9 billion

2008 was another destructive and costly year for natural catastrophes in the U.S.:

- Insured losses for the first 9 months of 2008 were nearly \$25 billion, according to the Insurance Services Office (ISO).
- There were 16 named tropical storms, including 8 hurricanes. Ike, the most destructive hurricane of 2008, slammed into Texas in September, becoming the fourth costliest hurricane in U.S. history with an estimated \$15 billion in insured losses, according to the Munich Re Group.
- Including claims covered by the National Flood Insurance Program, the overall estimated losses from Hurricane Ike are \$30 billion, according to the Munich Re Group.
- It was an unusually severe year for tornadoes with approximately 1,700 hitting the U.S. A series of tornadoes that killed 12 people in May generated insured losses of more than \$1.3 billion, according to the Munich Re Group.
- Widespread flooding was reported in many regions due to storms in the Midwest, Hurricane Ike's residual rains from Texas to Pennsylvania, and winter storms in the Northwest, among other weather events. FEMA reported that 11 million people in 9 Midwestern states were affected by flooding in 2008.
- Wildfires in Southern California destroyed approximately 1000 homes, triggering an EQECAT-estimated total property loss of up to \$500 million.

Natural catastrophe risks are increasing along with federal disaster recovery costs:

- Federal Emergency Management Agency's disaster relief costs totaled more than \$43 billion for 2004 and 2005; \$6 billion more than was spent in the prior 10 years combined, according to a report by the General Accounting Office.
- The latest available federal population figures show :
 - Approximately 29% of the nation's population lived in a county that experienced at least one hurricane from 1980 through 2005;
 - Approximately 41% of the U.S. population resides in counties that face medium to high seismic risk;
 - Nearly 24% of the U.S. population lived in a county where a wildland fire burned over 1,000 acres from 1980 through 2005; and
 - Five states - Alabama, Arkansas, Kansas, Oklahoma, and Texas - each had one county that experienced five or more severe tornadoes between 1980 and 2005.

Strong construction pays dividends:

- Every \$1 increase in costs to build a house using modern building code provisions for seismic and wind loss prevention measures over the cost to build houses using older building codes results in a savings of \$6 to society over the life of the structure, according to studies that examined costs and benefits of adopting modern building codes in California and Texas.
- Losses from Hurricane Andrew, which struck south Florida in 1992, and caused more than \$20 billion (in today's dollars) in insured damage, would have been reduced by 50% for residential property and by 40% for commercial property if the destroyed and damaged structures had been built in compliance with Florida's 2004 statewide building code, according to a study by the Institute for Business & Home Safety (IBHS).
- Homes built to the modern Florida Building Code experienced a 60% reduction in the frequency (actual number) of property losses and a 42% reduction in loss severity (dollar amount of insurance claims) during Hurricane Charley in 2004, according to IBHS research.

Loss prevention produces long-term benefits.

- Every \$1 spent on property loss prevention projects saves society (individuals, states and communities) an average of \$4 in terms of future reduced losses, according to the Multi-hazard Mitigation Council (MMC) of the National Institute of Building Sciences.
- \$1 spent on loss prevention (mitigation) grants by FEMA led to an average of \$3.65 in avoided post-disaster relief costs and increased federal taxes, according to the MMC analysis.
- A total of \$3.5 billion in federal hazard mitigation grants were issued between 1993 and 2003, resulting in a \$14 billion reduction in property losses and business interruptions due to earthquakes, flooding and hurricanes, according to a FEMA study.
- A 50% reduction in annual average wind-related damage is possible for older homes in Florida through targeted retrofitting, according to analysis performed for the Florida Office of Insurance Regulation by Applied Research Associates. The typical retrofitting includes 1.) Re-nailing the roof deck, 2.) Installing a secondary water barrier and high wind rated roof cover, and 3.) Installing shutters.