



Demotech, Inc.

North Carolina Homeowners Writers Fortunate in Bouts with Hurricane and Tropical Storms

by Joseph L. Petrelli, ACAS, MAAA, FCA
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DRAGONFLY:
300 MILLION YEARS OLD



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EXTINCT

Nature knows size and survival are independent.

Demotech, Inc. had to prove that to the insurance industry.

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Earlier in 2010, Colorado State's Tropical Meteorology Project forecasted eight hurricanes to emerge from fifteen named tropical storms in the Atlantic basin. Of those, four were forecasted to become major hurricanes. On August 29, Tropical Storm Earl was upgraded to a hurricane and reached Category 4 status. Hurricane Earl headed toward the eastern coast of the United States. As Hurricane Earl rampaged through the Caribbean, federal and state officials feared a hurricane reminiscent of 1991's Hurricane Bob and began preparing to evacuate areas of the coast.

Although Hurricane Earl dissipated and there was no major damage to the eastern coast of the United States, North Carolina Governor Beverly Perdue shared the sentiment of many of North Carolina's residents when she stated that "North Carolina dodged a bullet" when Earl missed the coast.

Not long after Earl vacated the area, there were warnings and preparations made for the arrival of Tropical Storm Nicole. The storm brought massive amounts of rain and flooding. States of emergency were declared in parts of Florida, North Carolina and as far north as Delaware. Thankfully, Tropical Storm Nicole swept through the region without much damage reported. Again, North Carolina dodged a bullet. In fact, major storm activity from 1980 to date indicates that North Carolina has seen several bullets whiz by (Exhibit 1).

Homeowners multi-peril writers in North Carolina are breathing a little easier now that Earl and Nicole have passed. In 2009 (Exhibit 2), the top ten homeowners writers reported over \$1.25 billion of homeowners direct premium written in North Carolina. This amount represents approximately 68.5 percent of all homeowners direct premium written in the state. The top ten in 2009 is also the same group from 2008.

Since the homeowners multi-peril market in North Carolina has been relatively stable over the last few years, the top ten homeowners writers for 2010 can be projected using the filed quarterly statements as of June 30, 2010 (Exhibit 3). Nine of the top ten should remain in the list, but it is projected that Liberty Mutual Fire Insurance will drop from the top ten homeowners writers in North Carolina. If June 30 information is an indication of year-end 2010, replacing them on the list of top ten would be Peerless Insurance Company.

When compared to other areas hit by these storms, it is clear that North Carolina dodged a couple of bullets. Unfortunately, North Carolina cannot rely on luck or good fortune for storms to change their course in the future. North Carolina may have a property insurance crisis comparable to what Florida is facing. Hopefully, North Carolina will utilize the lessons learned and be better prepared if that day ever occurs.

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Joseph L. Petrelli is the President and Founder of Demotech, Inc. Demotech, Inc. is a Columbus, Ohio based financial analysis firm. Demotech provides Financial Stability Ratings® (FSRs) and consulting services to property and casualty insurance companies, title underwriters and specialty insurers of any size. FSRs of A or better are recognized by the secondary mortgage marketplace, virtually all mortgage lenders, several premium finance companies, an increasing number of umbrella insurance markets and several insurance agent's errors and omissions insurers. Demotech is committed to leveling the playing field for insurers of all sizes. For more information, visit www.demotech.com.

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| Major Storm Activity in North Carolina, 1980 - Present (Exhibit 1) | | |
|---|-----------------------------|--|
| Date | Storm | Notes |
| 8/27/80 | Hurricane Charley | Northeasterly winds contributed to six deaths. |
| 6/7/81 | Name of storm not known | The remnants of a tropical depression brought light precipitation to the state. |
| 7/1/81 | Tropical Storm Bret | Outer rainbands dropped light rainfall across North Carolina. |
| 8/20/81 | Tropical Storm Dennie | Brushed the Outer Banks with moderate rainfall peaking at 10.7 inches near Wilmington. Scattered power outages and road closures from flooding were reported, but damage is minimal. |
| 11/12/81 | Name of storm not known | A subtropical storm produced coastal flooding and beach erosion. |
| 6/19/82 | Subtropic Storm One | Brushed the coastline and causes some minor flooding due to locally moderate precipitation. |
| 9/11/82 | Tropical Storm Chris | Dropped light rainfall in western North Carolina. |
| 9/30/83 | Tropical Storm Dean | Produced scattered rainfall across North Carolina. |
| 10/24/83 | Hurricane Tico | Dropped moderate precipitation across the state. |
| 9/13/84 | Hurricane Diana | Struck near Cape Fear with winds of about 90 mph with rainfall in the state peaking at 19 inches. Caused three indirect fatalities and about \$70 million in damage. |
| 9/29/84 | Tropical Storm Isidore | Dropped heavy rainfall near the coast. |
| 10/14/84 | Hurricane Josephine | Caused minor damage and overwash along the Outer Banks. |
| 10/29/84 | Name of storm not known | A tropical depression dissipated after bringing light rainfall to the western portion of the state. |
| 7/25/85 | Hurricane Bob | Caused one traffic fatality in North Carolina. |
| 8/18/85 | Hurricane Danny | Dropped moderate precipitation while crossing the state. |
| 9/1/85 | Hurricane Elena | Outer rainbands dropped light rainfall in the southern portion of the state. |
| 9/23/85 | Tropical Storm Henri | Dropped light rainfall near the coastline. |
| 9/27/85 | Hurricane Gloria | Caused severe coastal flooding and one death in the state. |
| 10/15/85 | Tropical Depression Isabel | Produced light rainfall along the coastline before dissipating. |
| 11/1/85 | Tropical Storm Juan | Produced heavy rainfall in western North Carolina. The precipitation caused a mudslide. |
| 11/22/85 | Tropical Storm Kate | Dropped moderate rainfall across the state. |
| 6/1/86 | Tropical Storm Andrew | Caused one death in the state. |
| 8/17/86 | Hurricane Charley | Caused one indirect death. |
| 10/1/86 | Hurricane Roslyn | Dropped moderate precipitation in the western portion of the state. |
| 8/27/87 | Name of storm not known | The remnants of an unnamed tropical storm produced rainfall along the coastline. |
| 9/1/87 | Tropical Depression Nine | Produced light to moderate rainfall as it crossed the state. |
| 8/29/88 | Tropical Depression Chris | Produced light precipitation. |
| 9/5/88 | Tropical Depression Ten | Dropped rainfall across much of the state. |
| 9/10/88 | Hurricane Florence | Outer rainbands produced light amounts of rainfall in the state. |
| 11/24/88 | Tropical Storm Keith | Produced light rainfall along the coastline. |
| 7/1/89 | Tropical Storm Allison | Dropped heavy rainfall in the state's western region. |
| 9/22/89 | Hurricane Hugo | Strong winds destroyed or severely damaged many homes across the state. Damage was estimated at \$1 billion and there was one direct death and seven indirect deaths in the state. |
| 7/31/90 | Hurricane Bertha | Caused rough surf. |
| 10/11/90 | Hurricane Klaus | Dropped heavy rainfall in the state's interior section. |
| 10/13/90 | Tropical Storm Marco | Causing two direct deaths and two indirect traffic deaths. |
| 10/13/90 | Hurricane Lili | Caused minor beach erosion. |
| 7/3/91 | Tropical Storm Ana | Brought light rainfall in the center of the state. |
| 8/19/91 | Hurricane Bob | Caused one death and \$4 million in damage. |
| 10/28/91 | Hurricane Grace | Produced heavy surf and gale force winds along the Outer Banks. |
| 10/31/91 | The 1991 Perfect Storm | Caused severe flooding along the Outer Banks. Damage amounts to over \$5 million. |
| 8/28/92 | Hurricane Andrew | Dissipated in the western portion of the state, dropping light to moderate precipitation. |
| 9/25/92 | Tropical Storm Danielle | Brushed the outer banks, causing light flooding which destroys three houses. |
| 9/29/92 | Tropical Storm Earl | Produced light rainfall near the southeast coastline. |
| 8/31/93 | Hurricane Emily | Strong winds left 553 dwellings uninhabitable. Damage amounts to about \$35 million primarily on Hatteras Island. Caused two deaths. |
| 7/5/94 | Tropical Depression Alberto | Brought moisture that causes light rainfall in North Carolina. |
| 7/21/94 | Tropical Depression Two | Dropped light rainfall along its path near Charlotte. |
| 8/17/94 | Tropical Depression Beryl | Spawned nine tornadoes and dropped heavy rainfall, peaking at 13.8 inches while crossing the western portion of the state. |
| 11/17/94 | Hurricane Gordon | Caused significant flooding and strong winds along the Outer Banks. Some beachfront homes in Kitty Hawk were destroyed or severely damaged. |
| 6/6/95 | Hurricane Allison | Produced heavy rainfall in the eastern portion of the state which caused flooding, resulting in \$5 million in crop damage. |
| 8/7/95 | Tropical Depression Erin | Dissipated over the Appalachian Mountains and dropped light rainfall in the state's western portion. |
| 8/17/95 | Hurricane Felix | Three people are killed. |
| 8/28/95 | Tropical Depression Jerry | Dropped heavy rainfall that causes flooding. Dozens of homes sustain flood damage and damage in the state totals over \$7.5 million. |
| 9/7/95 | Hurricane Luis | One person is killed. |
| 10/5/95 | Hurricane Opal | Produced moderate rainfall across and gusty winds across much of the state. Caused one direct death and one indirect death. Damage is over \$15 million. |
| 6/20/96 | Tropical Storm Arthur | Crossed the Outer Banks with moderate surf and light rainfall. |
| 7/12/96 | Hurricane Bertha | Destroyed hundreds of structures and damaged thousands more. Damage amounts total over \$250 million. Caused one direct death and one indirect death in the state. |
| 8/29/96 | Hurricane Eduardo | Impacted the state with high surf, which caused some overwash. |
| 9/6/96 | Hurricane Fran | Wind gusts peaked at 137 mph. In North Topsail Beach and Carteret County alone, the hurricane damaged or destroyed 6,688 structures. Further inland, heavy rainfall caused river flooding. Across the state damage amounts total about \$2.55 billion. Caused a total of six direct deaths and eight indirect deaths in the state. |
| 10/8/96 | Tropical Storm Josephine | Caused some flooding after dropping light to moderate precipitation across the state. |

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| Major Storm Activity in North Carolina, 1980 - Present (Exhibit 1) | | |
|---|-----------------------------|---|
| Date | Storm | Notes |
| 7/24/97 | Hurricane Danny | Produced moderate precipitation up to 12.3 inches in Albemarle. Caused two deaths. |
| 8/27/98 | Hurricane Bonnie | Caused one death in the state. Caused damage in the state estimated at about \$480 million. |
| 9/4/98 | Hurricane Earl | Dropped moderate rainfall while crossing the state. |
| 9/22/98 | Tropical Storm Hermine | Produced light rainfall in the state. |
| 9/29/98 | Hurricane Georges | Dropped light rainfall in the state. |
| 8/30/99 | Hurricane Dennis | Dropped heavy rainfall peaking at 19.9 inches. Caused localized severe beach erosion. Damage in the state amounted to over \$50 million. |
| 9/16/99 | Hurricane Floyd | Brought wind gusts of up to 122 mph. Dropped heavy rainfall of over 20 inches which caused record-breaking river flooding that is considered a 1 in 500 year event. Damage amounted to over \$3 billion, with over 7,000 homes destroyed and another 56,000 damaged. Caused 35 direct deaths and 16 indirect deaths in the state. |
| 9/21/99 | Tropical Storm Harvey | Produced light rainfall along the North Carolina coastline. |
| 10/18/99 | Hurricane Irene | Caused one indirect death. |
| 9/12/00 | Hurricane Florence | Caused three deaths. |
| 9/19/00 | Hurricane Gordon | Dropped light to moderate rainfall. |
| 9/23/00 | Tropical Depression Helene | Produced moderate rainfall across much of the state which peaked at 8.31 inches. |
| 6/13/01 | Tropical Depression Allison | Dropped over 10 inches of rainfall in the northeastern portion of the state. Caused nine indirect deaths. |
| 8/8/01 | Tropical Storm Barry | Dropped light rainfall in the state's mountainous region. |
| 7/14/02 | Tropical Storm Arthur | Dropped light rainfall near the coast. |
| 9/10/02 | Tropical Storm Gustav | Caused minor damage. |
| 9/15/02 | Tropical Storm Hanna | Dropped moderate rainfall across much of the state. Caused some flooding in Wilmington. |
| 9/27/02 | Hurricane Isadore | Downed trees and power lines across the western portion of the state. |
| 10/11/02 | Tropical Storm Kyle | Spawned an F2 tornado in Pantego as well as a few weaker tornadoes. Caused about a dozen damaged or destroyed houses. |
| 7/2/03 | Tropical Storm Bill | Dropped heavy rainfall peaking at 9.7 inches in Transylvania County. Caused one death. |
| 7/26/03 | Tropical Depression Seven | Dropped light rainfall in southern North Carolina. |
| 9/1/03 | Tropical Storm Grace | Produced light rainfall across much of the state. |
| 9/4/03 | Hurricane Fabian | Caused one death. |
| 9/12/03 | Tropical Storm Henri | Dropped light rainfall. |
| 9/18/03 | Hurricane Isabel | Brought winds of 105 mph and caused one direct death and two indirect deaths in the state. Damage in the state totaled \$450 million, most of which in Dare County |
| 8/3/04 | Hurricane Alex | Produced strong waves and moderate storm surge flooding. Caused one death. |
| 8/13/04 | Tropical Storm Bonnie | Spawned an F2 tornado near Rocky Point, causing three deaths and destroying 17 houses and severely damaging 27 buildings. |
| 8/14/04 | Hurricane Charley | Resulted in moderate winds and about \$25 million in damage. |
| 8/30/04 | Tropical Depression Gaston | Brought moderate precipitation which caused some flooding. |
| 9/8/04 | Hurricane Frances | Dropped very heavy rainfall peaking at 23.6 inches. Caused widespread flooding. Hundreds of homes and businesses were damaged or destroyed. |
| 9/17/04 | Hurricane Ivan | Dropped heavy rainfall peaking at 17.0 inches, as well as produced 4 tornadoes in the state. Caused eight deaths in the state. Flood damaged or destroyed hundreds of buildings. |
| 9/25/04 | Hurricane Jeanne | Caused one death and flooding |
| 6/12/05 | Tropical Depression Arlene | Produced locally heavy rainfall peaking at 9.84 inches. |
| 7/7/05 | Hurricane Cindy | Spawned eight tornadoes in the state, including one near Harmony that damaged or destroyed over a dozen structures. |
| 7/11/05 | Tropical Depression Dennis | Dropped moderate to heavy precipitation in western North Carolina. |
| 8/30/05 | Hurricane Katrina | Produced moderate rainfall and gusty winds in the western portion of the state. |
| 9/14/05 | Hurricane Ophelia | Dropped heavy rainfall peaking at 17.5 inches and caused \$70 million in damage. |
| 10/7/05 | Tropical Storm Tammy | Dropped light rainfall in the southern portion of the state. |
| 10/23/05 | Hurricane Wilma | Outer rainbands dropped over 3 inches of precipitation in the Outer Banks. |
| 6/14/06 | Tropical Storm Alberto | Produced heavy rainfall peaking at 7.16 inches. Caused one indirect death. |
| 9/1/06 | Tropical Storm Ernesto | Flooded dozens of houses due to heavy rainfall. Damage was estimated at over \$20 million. |
| 5/7/07 | Subtropic Storm Andrea | Caused moderate damage along the Outer Banks and caused four deaths. |
| 6/3/07 | Tropical Storm Barry | Crossed the eastern portion of the state and dropped light rainfall. |
| 8/22/07 | Tropical Storm Erin | Brought light rainfall. |
| 9/9/07 | Tropical Storm Gabriella | Produced locally heavy rainfall but caused little damage. |
| 9/15/07 | Hurricane Humberto | Dropped light rainfall across much of the state. |
| 11/3/07 | Hurricane Noel | Moderate winds leave about 6,000 people without power in the state. |
| 7/12/08 | Hurricane Bertha | Contributed to rip currents along the coast, which lead to dozens of lifeguard rescues. |
| 7/20/08 | Tropical Storm Cristobal | Dropped light rainfall and caused minor flooding. |
| 9/5/08 | Hurricane Hanna | Brought strong winds and torrential rains. Caused minor structural damage. |
| 5/27/09 | Tropical Depression One | Triggered shower activity and increased wind. |
| 8/22/09 | Hurricane Bill | Generated long periods of rough surf and rip currents |
| 8/28/09 | Tropical Storm Danny | Caused one death. |
| 11/12/09 | Hurricane Ida | Dropped heavy rainfall, up to 14.03 inches, in portions of the state. |
| 8/7/10 | Tropical Storm Colin | Caused one death. |
| 9/3/10 | Hurricane Earl | Produced hurricane force wind gusts that severely damaged six houses. Damage in the state reached \$2.5 million. |
| 9/19/10 | Hurricane Igor | Caused one death. |

**North Carolina Homeowners Writers Fortunate
in Bouts with Hurricane and Tropical Storms**

| Exhibit 2 - Homeowners Multi-Peril Direct Premium Written | | | | | |
|--|----------------------|-----------------------|----------------------|-----------------------|--------------------------|
| Company | 12/31/09 DPW | % of Total | 12/31/08 DPW | % of Total | Change in DPW |
| State Farm Fire and Casualty Co | 354,511,645 | 19.5% | 323,305,230 | 18.8% | 9.7% |
| North Carolina Farm Bureau Mutual Ins Co | 240,138,405 | 13.2% | 222,190,686 | 12.9% | 8.1% |
| Nationwide Mutual Fire Insurance Co | 157,231,901 | 8.6% | 163,158,593 | 9.5% | -3.6% |
| Nationwide Mutual Insurance Co | 121,639,948 | 6.7% | 105,025,528 | 6.1% | 15.8% |
| Allstate Insurance Co | 87,554,579 | 4.8% | 90,614,896 | 5.3% | -3.4% |
| Erie Insurance Exchange | 75,762,233 | 4.2% | 68,796,188 | 4.0% | 10.1% |
| Allstate Indemnity Co | 75,469,976 | 4.2% | 73,264,712 | 4.2% | 3.0% |
| United Service Automobile Assn | 57,356,720 | 3.2% | 52,162,859 | 3.0% | 10.0% |
| Unitrin Auto & Home Ins Co | 37,980,351 | 2.1% | 42,084,908 | 2.4% | -9.8% |
| Liberty Mutual Fire Insurance | 37,333,989 | 2.1% | 34,727,566 | 2.0% | 7.5% |
| Top 10 Homeowners Writers in NC | 1,244,979,747 | 68.5% | 1,175,331,166 | 68.2% | 5.9% |
| All Other Homeowners Writers in NC | 573,051,497 | 31.5% | 548,958,276 | 31.8% | 4.4% |
| Total Homeowners Writers in NC | 1,818,031,244 | 100.0% | 1,724,289,442 | 100.0% | 5.4% |

Data source: The National Association of Insurance Commissioners, Kansas City, Missouri, by permission. Information derived from a Highline Data product. The NAIC and Highline Data do not endorse any analysis or conclusion based upon the use of its data.

| Exhibit 3 - Projected 2010 Top 10 Homeowners Multi-Peril Direct Premium Written in North Carolina | | |
|--|---------------------------|--------------------------|
| Company | Projected 2010 | Change in DPW |
| State Farm Fire and Casualty Co | 373,095,980 | 5.2% |
| North Carolina Farm Bureau Mutual Ins Co | 260,630,421 | 8.5% |
| Nationwide Mutual Fire Insurance Co | 145,565,468 | -7.4% |
| Nationwide Mutual Insurance Co | 120,774,037 | -0.7% |
| Allstate Insurance Company | 81,379,139 | -7.1% |
| Erie Insurance Exchange | 76,545,495 | 1.0% |
| Allstate Indemnity Company | 66,791,046 | -11.5% |
| United Service Automobile Assn | 59,675,981 | 4.0% |
| Peerless Insurance Company | 39,603,929 | 13.0% |
| Unitrin Auto & Home Ins Co | 37,984,385 | 0.0% |

Projections are based on the percentage of countrywide direct premium written expected to be written in North Carolina.

Demotech, Inc. Milestones

- 1985** Founded by Joseph L. Petrelli and Sharon M. Romano to offer actuarial services.
- 1986** First to issue Financial Stability Ratings® (FSRs) for health maintenance organizations (HMOs).
- 1987** First to issue FSRs for public entity liability self-insured pools through the development of our Management Audit Process.
- 1989** First to have Property and Casualty insurance company rating process formally reviewed and accepted by Fannie Mae. An FSR of A or better eliminates the need for property insurance cut-through endorsements.
- 1990** First to have Property and Casualty insurance company rating process formally reviewed and accepted by Freddie Mac.
- Began offering Property and Casualty insurance companies and Title underwriters loss cost analysis and rate, rule and form filing assistance.
- Responded to the National Association of Insurance Commissioners (NAIC) requirements for Property and Casualty insurers to submit Statements of Actuarial Opinion related to loss and loss adjustment expense reserves concurrent with the 1990 Property and Casualty annual statement.
- 1992** First to analyze the financial position for each Title underwriter.
- 1993** First to have Property and Casualty insurance company rating process formally reviewed and accepted by HUD.
- 1994** Fannie Mae issued Title underwriting guidelines, naming Demotech as an approved Title underwriter rating service.
- 1995** First to promulgate Commercial Real Estate Recommendations (CRERs) to provide additional financial due diligence of Title underwriters involved in larger real estate transactions.
- 1996** Contacted by the Florida Office of Insurance Regulation (OIR) when the property insurance market encountered newly established insurers that did not meet traditional rating requirements. Working with the Florida OIR, Demotech developed evaluation procedures for the assignment of FSRs to newly formed Property and Casualty companies.
- Coordinated the first seminar regarding the implementation of Statements of Actuarial Opinion for Title insurance companies on behalf of the Conference of Consulting Actuaries and in cooperation with the American Land Title Association (ALTA).
- 1999** Co-authored the Commerce Clearing House publication describing the evolution of the Canadian Title insurance industry.
- 2001** Completed the initial loss and loss adjustment expense review of the Iowa Finance Authority – Title Guaranty Division.
- 2002** Revitalized the Ohio Title Insurance Rating Bureau (OTIRB).
- 2003** Assisted the North Carolina Title Insurance Rating Bureau with the development and filing of Closing Services insurance product.
- Assisted the OTIRB with its first rate revision since 1980.
- 2004** Published Serious about Solvency – Financial Stability Rating® Survival Rates 1989 through 2004. This article outlines the description of our analysis process, the assignment of FSRs and the survival rates of those ratings. This retrospective analysis indicates that insurers earning FSRs of A or better had survival rates at or above expectations.
- 2005** HUD approved Demotech’s rating process for professional liability insurance under Notice H04-15, Professional Liability Insurance for Section 232 and 223(f) Programs.
- 2007** Designated as the “Official Research Partner” of Insurance Journal, providing research, actuarial and statistical support and collaborating on special joint reports pertaining to insurance industry performance and financial results.
- Expanded operations into a new facility reflecting our increased capacity to serve the industry and our clients.
- 2008** Introduced Insurance Agents’ Errors and Omissions Insolvency Gap Legal Defense Coverage.
- 2009** Expanded the Insolvency Gap Coverage to include indemnity as well as legal defense.
- 2010** Demotech, Inc. celebrates its 25th Anniversary!

Mission Statement

Demotech, Inc. will become the leading provider of innovative solutions to financial analysis issues by focusing our resources on niches presenting opportunity for corporate growth.

SERIOUS ABOUT SOLVENCY®



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