

EXECUTIVE SUMMARY

Legislative changes brought about by the passage of CS/CS/CS/HB 1495 added a new subsection to the law which creates and defines the role of the Florida Commission on Hurricane Loss Projection Methodology (Commission). The new requirement in s. 627.0628(4), F.S., directs the Commission to hold public meetings for the purpose of receiving testimony and data regarding the implementation of windstorm mitigation discounts. The Commission is further required to present a report by February 1, 2010, to the Governor, the Cabinet, the President of the Senate, and the Speaker of the House of Representatives to include recommendations for improving the process of assessing, determining, and applying windstorm mitigation discounts pursuant to s. 627.0629, F.S. In fulfilling the new requirement in the law, the Commission held six public meetings in Tallahassee, Florida. The input and data received during the process as well as other information gathered by the Commission resulted in this report.

Mitigation refers to the efforts undertaken to reduce the frequency or severity of loss. While there are many different types of mitigation (e.g., air bags in cars, alarm systems), the focus of this report is specifically on windstorm mitigation. For homes, windstorm mitigation can be separate from the structure (e.g., hurricane shutters) or they can be an integral part of the building (e.g., hurricane straps, longer roofing nails, or roof shape). While mitigation is an important part of all insurance markets, it should be especially true for markets that have significant exposure to catastrophic loss. For Florida, the potential benefits of windstorm mitigation are well documented and beyond dispute.¹

[Encouraging property loss mitigation against the risk of hurricane damage has become a major area of consensus for people on all sides of the debate over coastal insurance in hurricane-prone areas. Florida’s Governor and Cabinet, The Florida Legislature, Florida insurance regulators and consumer advocacy groups have all emphasized its importance. Providing consumers with a savings on their property insurance premiums provides an incentive for consumers to “harden” their homes and businesses. According to a survey by My Safe Florida Homes, over 30% of respondents said that a premium discount would be the most influential factor in a decision to harden their home.](#)

[Mitigation of damage also provides a substantial benefit to insurers of property in Florida because well-built homes suffer significantly less damage. Property insurance discounts have gained support around the country as a way to encourage mitigation. The idea that stronger homes should pay lower rates is non-controversial. Even before mandatory mitigation discounts, nearly all homeowners’ insurers took construction type and characteristics into account for the properties they cover. Certain construction materials and techniques qualify for lower rates than others.](#)

¹ [According to a report to the Florida Legislature on January 1, 2008, by the Florida Division of Emergency Management, “structural mitigation can result in significant hurricane loss reduction. Recent research indicates that improving the resiliency of the building stock located in hurricane-prone regions can markedly reduce loss and damage. In the aftermath of Hurricane Charley, post-disaster assessments indicated that insured losses for structures built under the 2002 Florida Building Code were as much as 40-50% lower than equivalent homes built to the Standard Building Code.” Also see Gurley \(2005\) and the 2008 ARA report.](#)

Mitigation discounts are not just an important tool for encouraging mitigation of property losses. Property loss mitigation is more than an economic issue. Stronger buildings result in fewer injuries and deaths from hurricanes and other natural disasters.

Given these benefits, windstorm mitigation has been widely touted as a critical component of the state's efforts to stabilize and strengthen the insurance market in Florida. By improving the performance of the housing stock against wind-related losses, windstorm mitigation was to result in greater market participation by insurers and reinsurers as the uncertainty surrounding the performance of the housing stock was reduced. Besides improving the safety for homeowners and their families, windstorm mitigation also was expected to lead to price stability for the market in general and premium reductions for some consumers.

Against this backdrop, a logical conclusion was that windstorm mitigation efforts would lead to a healthier property insurance market in Florida. Instead, during the time since the windstorm mitigation discounts were implemented, the financial performance of the residential property insurance market has worsened. This is particularly disconcerting given that the market has experienced no hurricane losses in the past four hurricane seasons.

The problems related to windstorm mitigation credits are complex and will not yield to a single solution. This complexity is driven by: 1) the use of modeling to determine the impact of various mitigation features on expected loss cost, 2) the translation of mitigation relativities to mitigation credits, 3) the application of mitigation credits into the ratemaking process, 4) gathering information regarding the insured population and reflecting that in the rates, and 5) potential inspection fraud and errors in determining windstorm mitigation credits.

In addition to the five items noted above, market distortions have been caused by 1) decisions on how those credits are to be applied to the ratemaking process, 2) timing issues related to insurer delays in requesting rate relief and the insurance regulator's determination that insurers have failed to provide sufficient justification for offsets to account for windstorm mitigation credits, 3) the use of one modeling firm's mitigation relativities to develop state approved mitigation credits, and 4) the potential presence of fraud, errors, misinterpretation of rules, etc. that impact on premium sufficiency and the quality and reliability of loss data.

Historical Background

The Florida Building Code establishes construction practices and building requirements that are directly related to windstorm mitigation. Hurricane Andrew was the bell weather event in Florida that clearly indicated the need to strengthen and improve the existing building code. This was done through major changes in the building code in 1993 and 2002.

The importance of windstorm mitigation practices from a public policy perspective is highlighted by actions taken by the Legislature to require recognition of the effects of hardened homes in residential property insurance rate filings. The enactment of s. 627.0629, F.S., in 1993 led the way for progressively more and more sophistication in the requirements for windstorm mitigation discounts. The Office of Insurance Regulation (OIR) was tasked with determining windstorm mitigation discounts "...that meet the minimum requirements of the Florida Building Code, based upon actual experience or any other loss relativity studies available to the office."

DRAFT: 1/21/10 — This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

The statute is augmented by further requirements in OIR's rule 69O-170.017, F.A.C. Additionally, the law specifies a future requirement to be met by February 1, 2011, for the adoption of a uniform home grading scale and the development of a method whereby windstorm mitigation discounts are directly correlated to a numerical rating assigned to a structure per s. 627.0629(1)(b), F.S.

Residential property insurers use output from hurricane loss models to develop their rates. Such models also incorporate various windstorm mitigation features associated with the residential structures, which are being modeled. The output of the models consists of loss costs that are then used by actuaries to develop rates. Insurers are required, according to s. 627.0629, F.S., to include actuarially reasonable windstorm mitigation discounts in their rate filings. Insurers must use the discounts developed by OIR or may use an alternative study as long as all assumptions are available to OIR for review. Additionally, insurers can modify other rating factors in their filing to reflect the overall revenue impact if the insurer has actual information on policies receiving the discounts and information to support the modification. Otherwise, insurers are not allowed to offset a loss of revenue that might result by virtue of applying the windstorm mitigation discounts to residential property insurance policies.

Indication of Problems

Data that directly address the impact of windstorm mitigation credits on insurer performance are not currently readily available. As noted earlier, there are several indicators of continuing financial problems in the residential property insurance market in Florida. While there are several possible explanations,² the following provide some indirect support for the suggestion that the application of windstorm mitigation credits in the Florida property insurance market is having a negative impact on insurer performance and financial viability.

- In his report to the Senate Banking and Insurance Committee on October 6, 2009, Insurance Commissioner Kevin McCarty indicated that windstorm mitigation credits were among a list of factors that are adversely impacting insurer performance in Florida.
- Losses related to windstorm mitigation credits was one of the reasons provided by State Farm Florida when it gave its notice of intent to withdraw from the state.
- The rating agency A.M. Best downgraded nine insurers in 2009 that sell homeowners insurance in Florida, and Demotech, who rates some of the smaller Florida insurers, withdrew its rating from six insurers. Two such insurers were ordered into receivership.
- Security First Insurance Company reported that its surplus position declined by \$2 million in September 2009 as compared to surplus in September 2008. Windstorm mitigation credits during this time period exceeded \$22 million.

² A number of circumstances have been reported to contribute to residential property insurers having financial difficulties. These include 1) the inability to compete with Citizens Property Insurance Corporation since its rates were frozen in 2007, 2) the problem of having to replace reinsurance coverage offered by the Florida Hurricane Catastrophe Fund with more costly private reinsurance, 3) the loss of revenue associated with providing excessive windstorm mitigation discounts and not being able to offset premiums, 4) the losses in asset values due to recent financial market conditions, 5) the continued loss development from hurricane claims, and 6) the rising cost of private reinsurance.

DRAFT: 1/21/10 — This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

- A majority of the homes qualifying for significant windstorm mitigation credits under the My Safe Florida Home program did so without having to undertake any additional windstorm mitigation activities.³
- Citizens Property Insurance Corporation provided \$700 million in mitigation credits for a policy base which generated just over an estimated \$2.5 billion of [wind] premium.

During the public hearing process the Commission received testimony identifying a number of problems and issues. Regarding the ratemaking process and the implementation of windstorm mitigation credits:

- Various factors are putting pressure on insurer costs at the same time that the public is demanding more and more rate relief in a difficult economy. The fairness and adequacy of rates is an important issue. Those policyholders with high risk exposures should pay for the cost of their exposure, but what they are charged should be fair and based on the best actuarial and scientific approaches rather than merely shifting cost from one set of policyholders to another.
- The translation from windstorm mitigation relativity to windstorm mitigation credit is one of the root causes of the current problems.
 - The decision by the OIR to use the weakest structure rather than the average structure for the mitigation credit base meant that the weakest structure received no credit while increasing the windstorm mitigation credit for the strongest structures (using the average structure would have resulted in credits for the stronger structures and surcharges for the weaker structures). This resulted in no additional charge for the weakest structure while the strongest structure qualified for credits in excess of 80 percent. Using the average structure would have resulted in a surcharge of 137 percent for the weakest structure and a credit of 58 percent for the strongest structure. The financial impact of using the weakest structure as the base became problematic as rate offsets (increases) were not available.⁴
 - In its 2008 study, Applied Research Associates (ARA) discusses the implementation of windstorm mitigation relativities stating, “Applying the loss relativities as rate differentials avoids the problems associated with a credit program that is based on normalization of relativities to the weakest structure.”

The residential structure inspection system lacks checks and balances; there are no audit requirements; there is very little accountability; and the system invites abuse and inefficiencies. Regarding the residential structure inspection system there is an indication of substantial fraudulent behavior.

- While not a direct indication of inspection fraud, some home inspectors are advertising their services free of charge to policyholders if the inspector cannot obtain a windstorm mitigation discount.
- Some inspectors are providing other “package” deals for various non-related services as an enticement to attract business.

³ According to the 2008 My Safe Florida Home Annual Report, 55% of the homes under the My Safe Florida Home program were “eligible for insurance savings without making a single improvement.”

⁴ In response to Emergency Rule 69OER7-1, F.A.C., OIR Informational Memorandum OIR-07-03M states, “Consequently, the windstorm mitigation discount filing shall not include any modification of the rating factors or base rates for any purpose, including the offset of revenue impact on current business.”

DRAFT: 1/21/10 – This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

- Some inspectors are alleged to merely “drive by” in order to conduct the inspection. Other inspectors are reported to perform an incomplete inspection due to their failure to inspect the attic space.
- In some instances, home inspectors might not have entered the structure but merely filled out the inspection form while talking to the policyholder over the phone.
- Abuse of the system is not limited to residential structure inspectors, but also includes agents, insurance companies, and homeowners.
- The penalty for fraud and abuse of the system is apparently not as strong and/or as clear as it could be. In many cases, a misdemeanor would be the maximum penalty, which may not be enough to discourage perpetrators knowing that they can easily get away with certain unscrupulous activities and practices.

There also are indications of inspection problems unrelated to fraud.

- Some errors result from honest mistakes arising from ambiguities and judgment.
- The current windstorm mitigation discount system does not require all homes to be inspected.
- For many of the homes that have been inspected, numerous errors are being recognized upon re-inspection.
- The quality of data is poor and impacts both hurricane computer modeling results and the validity of actual windstorm mitigation discounts being granted to consumers. The error rates that have come to light from re-inspection reports indicate that errors range as high as 55-80 percent depending on the region of the state (Florida Association of Insurance Agents 2009).

As indicated above, the current system of assessing, determining, and applying windstorm mitigation discounts has a number of problems. In providing our recommendations, we group these problems into four broad areas of concern which include 1) the application of mitigation credits into the ratemaking process, 2) a flawed residential structure inspection process, 3) incomplete and poor data quality, and 4) hurricane computer modeling limitations.

Recommendations

The Commission makes the following recommendations based on these four areas of concern.

- 1. *Rating and the Determination of Windstorm Mitigation Discounts*** – The process of assessing, determining, and applying windstorm mitigation discounts has resulted in tensions between insurers and regulators. The fairness and adequacy of rates are important issues. Windstorm mitigation discounts should be fair and based on the best actuarial and scientific approaches rather than merely shifting cost from one set of policyholders to another.

The Commission recommends the following:

- a. The role of the Office of Insurance Regulation should be limited to the review of rate filings. Windstorm mitigation relativities and discounts should be incorporated in the hurricane computer modeling review process. The Florida Commission on Hurricane Loss Projection Methodology should determine the appropriate windstorm mitigation standards and review models according to those standards.

- b. The determination and application of windstorm mitigation discounts applied to a policyholder's rates should be actuarially appropriate.
- c. The base rates and the mitigation plan need to be balanced to achieve adequate rates. The current application of windstorm mitigation credits should be modified to allow the insurance company to also use debits if more appropriate given their base rates.
- d. Mitigation features should be considered separately for Coverage A (structure), Coverage B (external structures), Coverage C (contents only), and Coverage D (additional living expense).
- e. Windstorm mitigation discounts should only apply to that portion of the premium affected by the mitigation features.
- f. Larger deductibles should be applied to wind losses if windstorm mitigation features such as shutters are not used at the time of a loss.

2. ***The Residential Structure Inspection Process*** – In the process of re-inspecting residential structures, numerous errors have been found. Some of these errors are related to inspection fraud while others are a byproduct of the process or the level of expertise of the inspector.

The Commission recommends the following with regards to inspection fraud:

- Statutory penalties should be increased to the level of a felony for conviction of fraudulent activities.

More broadly, the Commission recommends that the current residential structure inspection process be replaced with an independent inspection organization that would provide oversight and administer all aspects of the inspection process. Its sole purpose would be to ensure complete, unbiased, and the highest quality data on residential structures. The board of this independent inspection organization would consist of experts that understand windstorm mitigation of residential structures, data collection, hurricane modeling, insurance and reinsurance underwriting, and the inspection of residential structures. The My Safe Florida Home Program is a possible model for this organization which would operate as follows:

- a. A data base or data archive would be created and maintained so that various queries can be run regarding inspectors, mitigation features, and other relevant factors for the purpose of allowing access to the data for modeling and premium calculations. In addition, the data could be used to audit the inspection process.
- b. Residential structures should be inspected periodically (e.g., every five or ten years) in order to be entitled to continued windstorm mitigation discounts for those mitigation features that cannot be verified by photograph or other less expensive means. This will facilitate error correction and monitoring of mitigation features that deteriorate with age of the installation.
- c. An inspector pool would be created and each inspector would be certified by the independent inspection organization based on meeting various standards, background, training, and experience requirements. An inspector could be de-certified for poor performance.
- d. A phase-out and phase-in period would be needed until the independent inspection organization could be up and running. It is recommended that insurers continue their re-inspection programs and strive to correct errors. Each inspector should have a

unique identification number that should appear on all work products to help identify fraudulent activities.

3. ***Data Quality*** – As noted above, concerns about data include the lack of current data on the direct impact of windstorm mitigation credits on insurers and the level of mitigation credit activity at the exposure level. Additionally, significant concerns exist about the impact that inspection related inaccuracies will have on future loss data. In general, little consideration has been given to the quality and completeness of data.

The Commission recommends that policies and procedures be put in place to ensure complete and high quality data. The data should be consistent with hurricane computer modeling needs and sufficient for the level of “granularity” required for modeling. These include the following:

- a. All residential structures in the state should ultimately be inspected and the results entered into a centralized database which is publicly available subject to privacy issues.
 - b. On-line data collection systems need to be utilized that have built-in data and edit checks.
 - c. Re-inspections of residential structures should be conducted on a random sample of the residential structures to establish an error rate as a base line for quality improvement measurement purposes.
 - d. In order to provide data that can serve to document the current impact of windstorm mitigation on rates (pre-2007 to 2009), to establish benchmarking data on windstorm mitigation, and to serve as validation windstorm mitigation data for modelers, a data call should be implemented to collect the necessary ratemaking and financial data at the ZIP Code level.
4. ***Hurricane Computer Modeling*** – Although the currently accepted hurricane loss models have met standards regarding the projection of loss costs and probable maximum loss levels, they have not been reviewed in depth for their ability to model windstorm mitigation relativities as applied to policies on individual residential structures. This would require an expanded role for the Commission.

The Commission recommends the following:

- a. The current statute regarding the Commission, s. 627.0628, F.S., should be modified to:
 1. task the Commission with developing the appropriate mitigation standards,
 2. add a structural engineer to the Commission, and
 3. revert the Commission’s process of developing standards back to an annual basis rather than “every odd year.”⁵ This would expedite the development of the appropriate mitigation standards and the implementation of the windstorm mitigation discounts based on the revamped system.

⁵ The 2009 Legislative Session changed s. 627.0628, F.S., to require standards be adopted every odd year rather than every year.

DRAFT: 1/21/10 — This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

- b. Insurers should use the same hurricane loss model for developing windstorm mitigation discounts as they do for developing loss costs.

Finally, the Commission recommends that the uniform home grading system be repealed since it is not feasible and presumes a level of accuracy that does not currently exist.

Summary

Since the residential property insurance market is complex, the state of Florida has a number of worthwhile objectives and goals that need to be considered and simultaneously achieved. These include the need for solvent and financially stable insurers; the need to depopulate the residual market (Citizens Property Insurance Corporation); the need for fair, actuarial, and scientifically sound windstorm mitigation discounts for policyholders; the need to reduce future wind losses and protect Florida families with hardened residential structures; the need to eliminate fraud, abuse, adverse selection, and moral hazard from the system; the need for complete, unbiased, quality data on all residential structures; and the need to have credible windstorm mitigation discounts based on reliable and scientifically based hurricane loss models.

After hearing testimony, reviewing reports, and considering other available data and information, the Commission concludes that the current system for assessing, determining, and applying windstorm mitigation discounts has failed to operate as intended and has contributed to problems in the residential property insurance marketplace. It is important to recognize that this report highlights the systemic problems associated with windstorm mitigation credits and not the long-term benefits that windstorm mitigation efforts should provide. From a public policy perspective, mitigation efforts to reduce catastrophic exposure to wind continue to be important. However, other methods for financing or incentivizing property owners need to be considered as it is clear that relying on the insurance system as the primary funding source for mitigation via credits is not sustainable.

As noted above, the current problems are complex and systemic in nature. While some of the solutions described above can be implemented in the near term, most of them will take additional time if they are to be implemented properly. Any interim measures should be implemented to help prevent the current system from deteriorating further.

The Commission believes these recommendations, in the long-run, will help lead to:

- 1) Less fraud, less moral hazard, and less abuse in the system,
- 2) A higher quality of data that includes complete and accurate information on every residential structure in Florida,
- 3) More efficient and refined hurricane loss models,
- 4) An improved and more equitable rating system for all parties,
- 5) A more financially sound private insurance market,
- 6) A healthier Florida residual insurance market, and
- 7) Hardening residential structures to better withstand future windstorm losses.

Various problems and issues as well as the recommendations are discussed in greater detail in the body of this report.

INTRODUCTION

Mitigation refers to the efforts undertaken to reduce the frequency or severity of loss. While there are many different types of mitigation (e.g., air bags in cars, alarm systems), the focus of this report is specifically on windstorm mitigation. For homes, windstorm mitigation can be separate from the structure (e.g., hurricane shutters) or they can be an integral part of the building (e.g., hurricane straps, longer roofing nails, or roof shape). While mitigation is an important part of all insurance markets, it should be especially true for markets that have significant exposure to catastrophic loss. For Florida, the potential benefits of windstorm mitigation are well documented and beyond dispute.⁶

Encouraging property loss mitigation against the risk of hurricane damage has become a major area of consensus for people on all sides of the debate over coastal insurance in hurricane-prone areas. Florida's Governor and Cabinet, The Florida Legislature, Florida insurance regulators and consumer advocacy groups have all emphasized its importance. Providing consumers with a savings on their property insurance premiums provides an incentive for consumers to "harden" their homes and businesses. According to a survey by My Safe Florida Homes, over 30% of respondents said that a premium discount would be the most influential factor in a decision to harden their home.

Mitigation of damage also provides a substantial benefit to insurers of property in Florida because well-built homes suffer significantly less damage. Property insurance discounts have gained support around the country as a way to encourage mitigation. The idea that stronger homes should pay lower rates is non-controversial. Even before mandatory mitigation discounts, nearly all homeowners' insurers took construction type and characteristics into account for the properties they cover. Certain construction materials and techniques qualify for lower rates than others.

Mitigation discounts are not just an important tool for encouraging mitigation of property losses. Property loss mitigation is more than an economic issue. Stronger buildings result in fewer injuries and deaths from hurricanes and other natural disasters.

Given these benefits, windstorm mitigation has been widely touted as a critical component of the state's efforts to stabilize and strengthen the insurance market in Florida. By improving the performance of the housing stock against wind-related losses, windstorm mitigation was to result in greater market participation by insurers and reinsurers as the uncertainty surrounding the performance of the housing stock was reduced. Besides improving the safety for homeowners and their families, windstorm mitigation also was expected to lead to price stability for the market in general and premium reductions for some consumers.

⁶ According to a report to the Florida Legislature on January 1, 2008, by the Florida Division of Emergency Management, "structural mitigation can result in significant hurricane loss reduction. Recent research indicates that improving the resiliency of the building stock located in hurricane-prone regions can markedly reduce loss and damage. In the aftermath of Hurricane Charley, post-disaster assessments indicated that insured losses for structures built under the 2002 Florida Building Code were as much as 40-50% lower than equivalent homes built to the Standard Building Code." Also see Gurley (2005) and the 2008 ARA report.

DRAFT: 1/21/10 – This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

Against this backdrop, a logical conclusion was that windstorm mitigation efforts would lead to a healthier property insurance market in Florida. Instead, during the time since the windstorm mitigation discounts were implemented, the residential property insurance market has deteriorated. This is particularly disconcerting given that the market has experienced no hurricane losses in the past four hurricane seasons.

Legislation passed in the 2009 Legislative Session created a requirement for the Florida Commission on Hurricane Loss Projection Methodology (Commission) to report to the Governor, the Cabinet, the President of the Senate, and the Speaker of the House of Representatives by February 1, 2010, its recommendations for improving the process of assessing, determining, and applying windstorm mitigation discounts. The new law requires that the Commission hold public hearings for the purpose of receiving testimony and data.

Section 16 of CS/CS/CS/HB 1495 specifies the new requirement for the Commission. Subsection (4) was added to s. 627.0628, F.S. It reads as follows:

(4) REVIEW OF DISCOUNTS, CREDITS, OTHER RATE DIFFERENTIALS, AND REDUCTIONS IN DEDUCTIBLES RELATING TO WINDSTORM MITIGATION.--The commission shall hold public meetings for the purpose of receiving testimony and data regarding the implementation of windstorm mitigation discounts, credits, other rate differentials, and appropriate reductions in deductibles pursuant to s. 627.0629. After reviewing the testimony and data as well as any other information the commission deems appropriate, the commission shall present a report by February 1, 2010, to the Governor, the Cabinet, the President of the Senate, and the Speaker of the House of Representatives, including recommendations on improving the process of assessing, determining, and applying windstorm mitigation discounts, credits, other rate differentials, and appropriate reductions in deductibles pursuant to s. 627.0629.

The Commission is an independent body of experts created by the Legislature in 1995 for the purpose of developing standards and reviewing hurricane loss models used in the development of residential property insurance rates and the calculation of probable maximum loss levels.

The Commission began its work by discussing and understanding its mission and then by developing an approach to 1) gather information regarding the process of assessing, determining, and applying windstorm mitigation discounts, 2) understand the problems and issues associated with the current process, 3) understand various recommendations and solutions, and then 4) draft and finalize its recommendations for improving the process.

On Wednesday, August 12, 2009, the Commission held its first meeting to receive public testimony from various interested parties regarding the ratemaking process and procedures for the development of windstorm mitigation discounts. The Commission held its second meeting on Thursday, September 17, 2009, to solicit input from interested parties regarding problems and issues resulting from the current system of creating and implementing windstorm mitigation discounts. On Thursday, October 29, 2009, the Commission held its third meeting in order to solicit additional input regarding problems and issues and to begin its discussion of various solutions and recommendations. During these three meetings, the Commission heard 33 different presentations and the meetings included over 23 hours of testimony and discussion. The two main topic areas that were the focus of the presentations related to 1) the

DRAFT: 1/21/10 – This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

implementation of windstorm mitigation as it affects rates and insurer performance and 2) the process of qualifying for windstorm mitigation credits via the home inspection process. A list of presentations is provided in the References section of this report. Copies of the presentations and other related materials are available on the Commission’s website.

The Commission continued its discussion of solutions and recommendations at its Friday, December 18, 2009, meeting. The Commission held a meeting on Friday, January 15, 2010, to draft its recommendations, and on Monday, January 25, 2010, to finalize its recommendations for improving and refining the current process involving windstorm mitigation discounts.

The Commission’s recommendations are designed to improve the process by ensuring that rate differentials reflecting mitigation 1) are capable of being properly administered from a regulatory standpoint, 2) are scientifically determined and are expected to result in a true reduction of future wind losses, 3) are fair to consumers and insurers, and 4) can be implemented efficiently without fraud and/or abuses in the system.

This report continues with a discussion of the history relevant to the mitigation discount process in Florida followed by a discussion of the issues and problems associated with the current process. The report continues with a section that provides additional comments on the problems and issues associated with windstorm mitigation discounts and a discussion of the complexities that impact on potential solutions. This is followed by the Commission’s recommendations. The report concludes with a summary of the Commission’s findings and recommendations.

HISTORICAL BACKGROUND

The Florida Building Code establishes construction practices and building requirements that are directly related to windstorm mitigation. This was done through major changes in the building code in 1993 and 2002.

Mitigation has been a concern for the state of Florida going back to hurricane damage occurring during the 1940s and 1950s. The bell weather event in Florida that led to a series of significant changes in the building code was Hurricane Andrew. The failure of what was then deemed the “best hurricane code” in the United States clearly indicated the need to strengthen and improve the existing building code. In addition to creating the Florida Hurricane Catastrophe Fund, the Florida Residential Property & Casualty Joint Underwriting Association (the FRPCJUA)⁷, and the Commission in the aftermath of Hurricane Andrew, the state responded to the losses from Hurricane Andrew with a series of changes to the building code that included requirements to improve roof system requirements (1993) and major structural and building component upgrade requirements (1994). The state’s building product approval system was expanded and enhanced. A statewide building code with various local options was adopted in 2002 followed by a more recent adoption in 2007 (effective March 1, 2009). The overall impact from improving the building codes has been to strengthen residential structures. However, there still remains a wide variation in loss potential between a wind mitigated residential structure and a non-mitigated

⁷ The FRPCJUA was later combined with the Florida Windstorm Underwriting Association in 2002 to become Citizens Property Insurance Corporation.

DRAFT: 1/21/10 – This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

residential structure. Not all of Florida’s housing stock was built under the most recent building codes; therefore, structures built today may differ substantially in their wind vulnerability than those built in the past (Dixon 2009).

The importance of windstorm mitigation practices from a public policy perspective is highlighted by actions taken by the Legislature to require recognition of the effects of hardened homes in residential property insurance rate filings. The Legislature enacted s. 627.0629, F.S., in 1993, following Hurricane Andrew, to require insurers to offer shutter discounts or deductible reductions for fixtures designed to reduce hurricane losses. Since shutters were the most prevalent loss preventive technique, the rule became known as the “shutter discount rule.” The Office of Insurance Regulation (OIR) was tasked with determining windstorm mitigation discounts “...that meet the minimum requirements of the Florida Building Code, based upon actual experience or any other loss relativity studies available to the office.” The statute is augmented by further requirements in OIR’s rule 69O-170.017, F.A.C. Later in 2000, the Legislature sought to expand the sophistication of mitigation rating factors and added discounts for both fixtures and construction techniques for insurers to include in their rate filings. The idea was to incorporate the benefits of the enhancements brought about by the Florida Building Code into savings for consumers. This led the Legislature to adopt a rate filing requirement where enhanced discounts were to be incorporated in filings no later than February 28, 2003. Additionally, the law specifies a future requirement to be met by February 1, 2011, for the adoption of a uniform home grading scale and the development of a method whereby windstorm mitigation discounts are directly correlated to a numerical rating assigned to a structure per s. 627.0629(1)(b), F.S.

On June 6, 2002, the Department of Insurance (Office of Insurance Regulation or OIR today) issued an informational bulletin referring to both the filing deadline and the 2002 Applied Research Associates, Inc. (ARA) Study⁸ as the basis for deriving the actuarially reasonable rate differentials required by the statute. The bulletin advised insurers that they could not offset premium dollar reductions when implementing the windstorm mitigation discounts. To partly accommodate for the lack of an offset, the Department of Insurance allowed the modifying of the discounts such that they could be half of the full rate indications. This was known as 50 percent tempering of the discounts. A supplemental bulletin was issued on January 23, 2003, which further advised that the 50 percent tempering would be discontinued after insurers developed additional information about the implementation of the discounts. Additionally, the supplemental memorandum advised that the Building Code Effectiveness Grading Schedule (BCEGS)⁹ credits could be reduced by 25 percent to account for potential overlap with the

⁸After the statutory revisions to s. 627.0629, F.S., requiring rate filings to incorporate mitigation rating factors for both fixtures and construction techniques, the Florida Department of Community Affairs contracted with ARA to evaluate the effectiveness of wind resistance features in reducing hurricane damage and loss to single family residences in Florida. The project was completed in March 2002 and dealt with both existing construction and new construction built to the new Florida Building Code 2001 which became effective on March 1, 2002. The 2002 ARA study, Development of Loss Relativities for Wind Resistive Features of Residential Structures, provided data and information on estimated loss reduction for wind resistive building features in single-family residences in Florida.

⁹ The BCEGS assesses the building codes in effect in a particular community and how the community enforces its building codes, with special emphasis on mitigation of losses from natural hazards. The Insurance Services Office (ISO) developed BCEGS in conjunction with the Insurance Institute for Property Loss Reduction.

DRAFT: 1/21/10 — This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

required discounts. In a similar fashion, the Department of Insurance allowed insurers to modify or eliminate age of home credits recognizing another potential for an overlap.

In late 2006, the Financial Services Commission adopted revisions to rule 69O-170.017, F.A.C., which required the full implementation of windstorm mitigation discounts no later than March 1, 2007, but still did not allow for the offset in lost premium revenue. The removing of the 50 percent tempering has been referred to as “doubling” of the mitigation discounts. However, insurers have had an alternative to using these mitigation discounts since the rule reads, “*These discounts must be used without any modification unless they are supported by detail alternative studies where all assumptions are available to the Office for review.*” Additionally, the rule reads that, “*Filings can modify other rating factors to reflect revenue impact on current business only if they have actual information on policies receiving the discounts currently to support the modification.*”

Following the seven hurricanes that caused so much residential property damage in Florida during 2004 and 2005, OIR was directed by the Legislature to conduct another study. On November 20, 2007, OIR released a Request for Proposal for a “Residential Wind Loss Mitigation Study.” OIR selected ARA to conduct the study which was completed in October 2008. The results from this study, 2008 Florida Residential Wind Loss Mitigation Study, have not been adopted by rule as of the date of this report. The 2008 ARA study evaluated windstorm loss relativities for construction features, included single and multi-family homes, involved the analysis of damage and loss data from the 2004 and 2005 Florida hurricanes, and included the analysis and integration of new engineering load and test data to update the mitigation discount relativities (ARA 2008).

Under a separate statute, s. 215.55865, F.S., the Financial Services Commission was required to adopt a uniform home grading scale by June 30, 2007. By February 1, 2011, OIR in consultation with the Department of Financial Services and the Department of Community Affairs, is now required to “... *develop and make publicly available a proposed method for insurers to establish discounts, credits, or other rate differentials for hurricane mitigation measures which directly correlate to the numerical rating assigned to a structure pursuant to the uniform home grading scale adopted by the Financial Services Commission...*” In addition, changes to the uniform home grading scale may also be proposed.

In accordance with s. 627.711, F.S., insurers must notify policyholders at the time of policy issuance and annual renewal of the availability of mitigation discounts. OIR has adopted a form for this purpose – “Notice of Premium Discounts for Hurricane Loss Mitigation.” OIR has also adopted a form entitled “Uniform Mitigation Verification Inspection Form,” which is used for requesting mitigation discounts. The form requires a qualified inspector to verify the mitigation fixtures and construction techniques. OIR held a workshop on August 18, 2009, and a hearing on December 21, 2009, related to the nature of the form. Insurers noted numerous errors being made by inspectors using the form (Miller, T 2009). [OIR has since made additional changes to the form which will be presented to the Financial Services Commission for adoption.](#)

INDICATIONS OF PROBLEMS

There are several indicators of continuing financial problems in the residential property insurance market in Florida. While there are several possible explanations,¹⁰ the following provide some indirect support for the suggestion that the application of windstorm mitigation credits in the Florida property insurance market is having a negative impact on insurer performance and financial viability.

1. In his report to the Senate Banking and Insurance Committee on October 6, 2009, Insurance Commissioner Kevin McCarty indicated that windstorm mitigation credits were among a list of factors that are adversely impacting insurer performance in Florida.
2. Losses related to windstorm mitigation credits was one of the reasons provided by State Farm Florida when it gave its notice of intent to withdraw from the state.
3. Citizens Property Insurance Corporation provided information to the Commission on the impact of windstorm mitigation credits and other related factors that had adverse implications for Citizens. “As of 6/30/09, Citizens provided an estimated \$700 million in mitigation credits for a policy base which generated just over an estimated \$2.5 billion of [wind] premium.”
4. Security First Insurance Company reported that the annual windstorm mitigation credit was \$461 for its HO3 line of business. Security First’s surplus position was \$2 million lower in September 2009, as compared with its surplus position one year earlier. During this time period, the company reported that windstorm mitigation credits were in excess of \$22 million (see Figure 1).
5. In June 2009, A.M. Best downgraded the State Farm Insurance Company from B+ (Good) to B (Fair) citing a significant deterioration in earnings and risk-adjusted capitalization. This resulted from a sharp decline in premiums due to several reasons including the implementation of windstorm mitigation discounts (Business Wire 2009).
6. Nine insurers (in four different insurer groups) that write residential property insurance in Florida experienced rating downgrades by A.M. Best in 2009 (see Figure 2).
7. The rating agency, Demotech, reported that six insurers that write residential property insurance in Florida lost their Demotech rating in 2009 with two becoming insolvent.
8. According to the reports, there are two insurance companies that do not insure homes built after 2002.¹¹ These homes would be built under the 2002 building code and would qualify for higher mitigation credits.

¹⁰ A number of circumstances have been reported to contribute to residential property insurers having financial difficulties. These include 1) the inability to compete with Citizens Property Insurance Corporation since its rates were frozen in 2007, 2) the problem of having to replace reinsurance coverage offered by the Florida Hurricane Catastrophe Fund with more costly private reinsurance, 3) the loss of revenue associated with providing excessive windstorm mitigation discounts and not being able to offset premiums, 4) the losses in asset values due to recent financial market conditions, 5) the continued loss development from hurricane claims, and 6) the rising cost of private reinsurance.

¹¹ See Garcia 2009b regarding comments on the underwriting guidelines of Northern Capital Insurance and Northern Capital Select.



Source: Security First Insurance Company (Kruck 2009b)

Figure 1

Companies Downgraded by A.M. Best in 2009

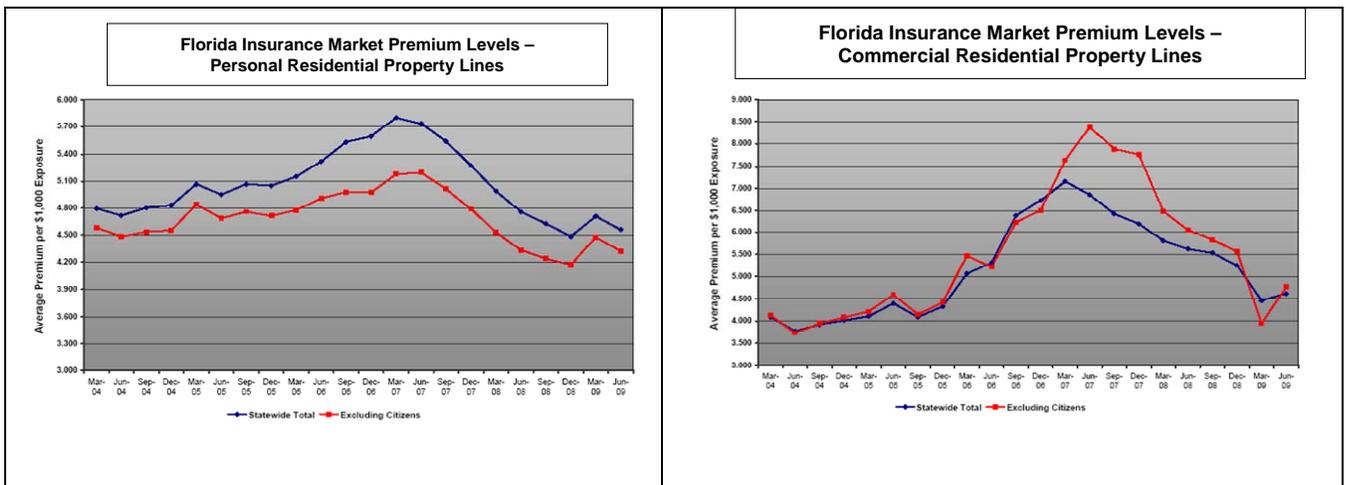
Company	Group	Previous Rating	Current Rating
Argus Fire & Casualty	United Automobile	C-	D
Castle Key Indemnity	Allstate	B+	B-
Castle Key Insurance	Allstate	B+	B-
Encompass Floridian Indemnity	Allstate	B+	B-
Encompass Floridian Insurance	Allstate	B+	B-
Omega	Tower Hill	B	NR-4
State Farm Florida	State Farm	B+	B
Tower Hill Preferred	Tower Hill	B	NR-4
Tower Hill Prime	Tower Hill	B	NR-4

Source: A.M. Best

Figure 2

Figure 3 illustrates the average premium per \$1,000 of exposure in the state for personal residential and commercial residential property insurance.¹² The blue line represents all policies while the red line represents all policies excluding Citizens’ policies. The trend movements for both lines are similar in that the average rates per \$1,000 have dropped from the first quarter of 2007 to the second quarter of 2009. During this time period, personal lines premiums per \$1,000 exposure appear to have dropped from \$5,800 to \$4,600 (-21 percent), whereas commercial residential lines have dropped from \$7,200 to \$4,600 (-36 percent). The drop in commercial lines residential policies excluding Citizens was much greater from \$8,400 to \$4,600 (-45 percent).

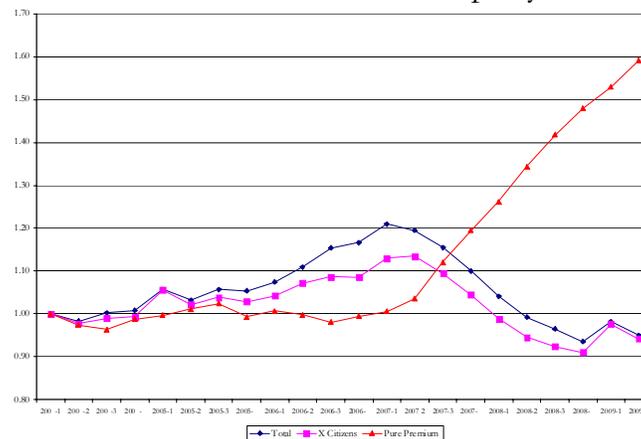
¹² Citizens, where the source data was derived from the Florida OIR’s Quarterly and Supplemental Reporting System.



Source: Citizens Property Insurance Corporation
Figure 3

The combination of decreasing premiums and increasing loss trends have led to increasingly inadequate rate indications and the associated negative impacts on the financial viability of the Florida property insurance market as illustrated in Figure 4 below. As noted above, mitigation credits are one of the factors that are impacting on premium trend levels.

Premium and Loss Trends since 2004
 Personal Residential Property



Source: Premium data from QUASR, as provided by Citizens, Pure premium data from Fast Tract (ISO Circular AS-HO-1009-017, excluding catastrophes), used as a proxy for the industry, CW, Fast Tract data represent ~58% of the industry
Figure 4

Citizens Property Insurance Corporation – The Alternative Market’s Issues

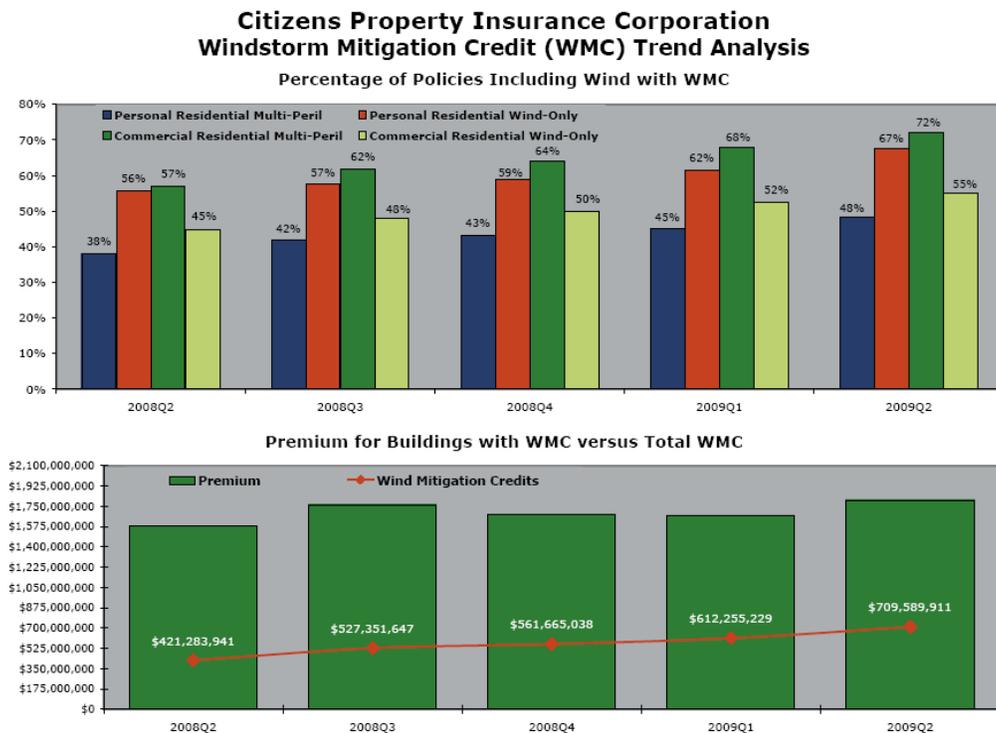
Until 2007, the statutory standard governing Citizens rates required that rates be actuarially sound, not competitive with the voluntary market and developed based on the top private carriers in Florida. In 2007, the rate requirements for Citizens were changed to eliminate the requirement

that they be noncompetitive and based on rates of the top private insurers. The new standard now requires that rates charged by Citizens be actuarially sound.

Citizens rates were frozen between 2007 and 2009 (required by CS/HB 1A). In 2007, property insurers in Florida were required to essentially double the windstorm mitigation credits that were in place. Because Citizens rates were frozen, unlike other insurers, Citizens was not permitted to offset base rates to account for increased mitigation credits.

In 2009, the law was further amended to limit rate increases (until actuarially sound rates are achieved) each year to no more than 10% for any single policy beginning with rate changes in January 2010. Prior to the revised windstorm mitigation credits, Citizens rates were not actuarially sound.

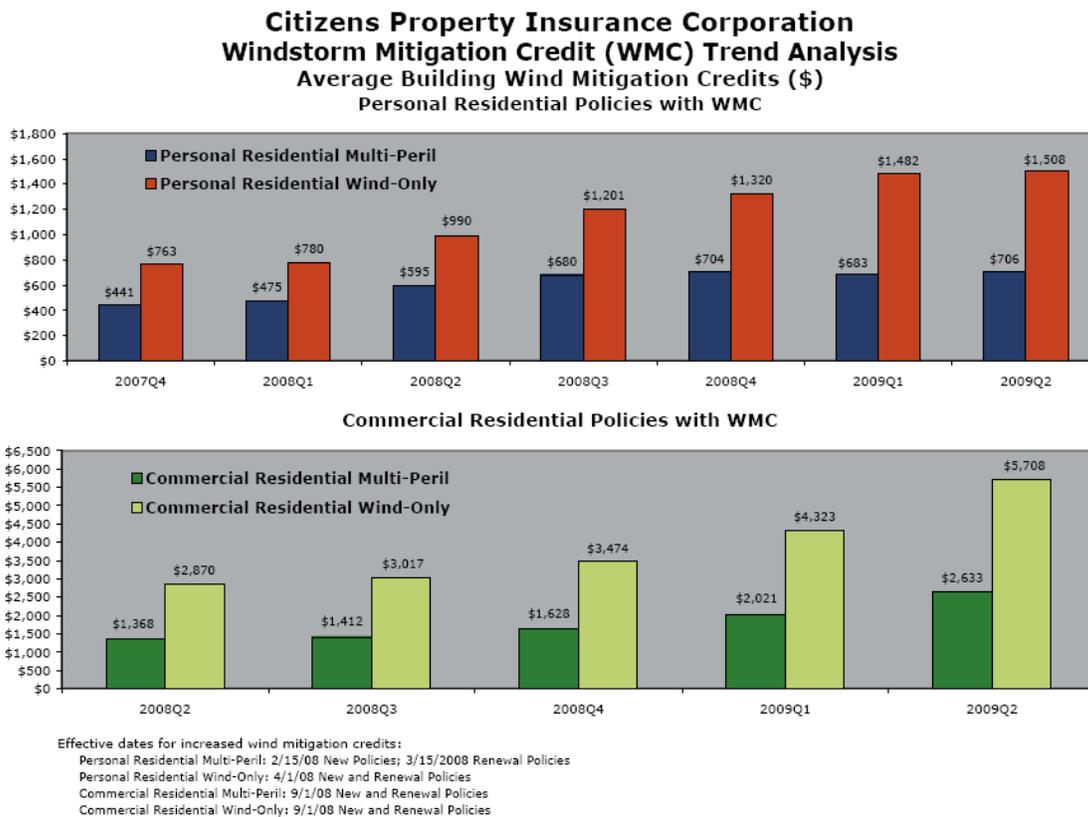
Figure 5 below provides details of the impact on the revised windstorm mitigation credits to Citizens. The first graph shows that over time the number of policies with windstorm mitigations is increasing. As stated previously, there has been a tremendous increase in the number of homes reporting windstorm mitigation credits. In the second graph, trends are shown for the relation of premium to windstorm mitigation credits. As the windstorm mitigation credits increases, Citizens premium charged does not increase at the same rate causing even more inadequate rates. Windstorm mitigation credits have increased by 68.4% (\$709,589,911 / \$421,283,941) from the second quarter in 2008 to the second quarter in 2009.



Source: Citizens Property Insurance Corporation

Figure 5

Figure 6 shows how the average windstorm mitigation credit given to a policyholder has increased significantly over time. For personal residential properties, there has been a 60.1% (\$706 / \$441) increase in the average credits for multi-peril policies and 97.6% (\$1,508 / \$763) increase in the average credits for wind-only policies between the fourth quarter in 2007 to the second quarter in 2009. For Commercial residential properties, there has been a 92.5% (\$2,633 / \$1,368) increase in the average credits for multi-peril policies and 98.9% (\$5,708 / \$2,870) increase in the average credits for wind-only policies between the fourth quarter 2007 and the second quarter 2009. The increases to the average credits are substantial and have a direct impact on Citizens financial abilities.



Source: Citizens Property Insurance Corporation

Figure 6

Comments on Problems and Issues

As noted earlier, the Commission held three days of meetings to gather public testimony related to windstorm mitigation credits. The purpose of this section of the report is to document some of the arguments/comments/suggestions that were provided to the Commission on the problem areas noted in the previous section.

Comments Related to Relativities and Ratemaking

The current regulatory ratemaking process for determining windstorm mitigation discounts per s. 627.0629, F.S., has been put in place where relativities from the ARA 2002 Study are used to

develop windstorm mitigation discounts.¹³ Insurers are allowed to use “detailed” alternative studies as long as all the information is provided to OIR for review. However, insurers claim that such studies are costly, and there is no assurance that the discounts will be approved after this expense has been incurred. Insurers have criticized OIR for its failure to adopt the newer ARA 2008 relativity study (Miller, T 2009a). The OIR points out that the new study’s results are not significantly different from that of the ARA 2002 study and that insurers are not prepared for dealing with the results, which may require changes to computer systems and additional data (Miller, B 2009b).

Insurers that use the adopted windstorm mitigation discounts are faced with the possibility of having to give virtually all of their policyholders discounts since the tables of discounts have been adjusted such that all but the lowest mitigated structure indicates a discount – see OIR-B1-1699 and OIR-B1-1700 forms. Insurers claim that the process results in exaggerated or overstated discounts. OIR points out that in a number of cases exaggerated results stem from the fault of the actuarial algorithms used by insurers such as applying windstorm mitigation discounts additively versus multiplicatively (Ritzenthaler 2009a). There have been actual situations where negative premiums have resulted.

Comments Related to Building Code Effectiveness Grading Schedule

A problem that insurers have recognized is that BCEGS (Building Code Effectiveness Grading Schedule) credits overlap with the promulgated windstorm mitigation discounts and result in a double counting problem. OIR attempted to address this problem in a 2003 bulletin with the suggestion of tempering the BCEGS credits by 25 percent to account for the overlap. Other situations have arisen where insurers give other discounts that might overlap with windstorm mitigation discounts such as a new home discount. OIR rejects this as a problem since it has allowed insurers to discontinue new home discounts. Although the process requires the application of the windstorm mitigation discounts to the wind premium, insurers point out that the wind premium also includes a portion for other structures and fixed expenses, which should not be included when the discount is being calculated. OIR notes that it is up to the insurer to remove these elements to derive an actuarially sound rate (Ritzenthaler 2009a).

Comments Related to the Use of One Model to Determine Relativities

The relativities were produced by one model – the ARA model. Questions have been raised as to what the results would have been had the relativities been calculated using one of the other models found acceptable by the Commission – AIR, EQE, RMS, or the FPM.¹⁴ OIR points out insurers have had the option to use detailed alternative studies and create their own actuarial algorithms when they file their rates. When the relativities were initially adopted, OIR published

¹³ Larry Twisdale of ARA, who headed up the 2002 study creating relativities used by OIR to determine the windstorm mitigation discounts in Form OIR-B1-1699 “Windstorm Mitigation Discounts: Single Family Residences” and Form OIR-B1-1700 “Windstorm Mitigation Discounts: Non-Single Family Residences,” commented in his presentation to the Commission in reference to the study, “But, you know the implementation has gotten mangled to some degree depending on the situation.”

¹⁴ ARA stands for Applied Research Associates, Inc, HurLoss Version 4.2a. AIR stands for AIR Worldwide Corporation, Atlantic Tropical Cyclone Model V11.0. EQE stands for EQECAT, Inc., EQECAT Florida Hurricane Model 2009. RMS stands for Risk Management Solutions, Inc., RiskLink Version 8.0.1a. FPM stands for Florida Public Hurricane Loss Model, Version 3.1. Each of these models has been found acceptable under the Commission’s 2008 standards based on the latest review results.

DRAFT: 1/21/10 — This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

an Informational Memorandum (OIR-03-001M) on January 23, 2003, indicating that only premium credits should be offered resulting in neutral or decreases in premium, but no premium increases. The credits were tempered by 50 percent to dampen large rate changes and account for possible differences among the various hurricane models and other factors. A subsequent Informational Memorandum (OIR-07-03M) issued on February 27, 2007, stated that the “...windstorm mitigation discount filing shall not include any modification of the rating factors or base rates for any purpose, including the offset of revenue impact on current business.” An insurer may be able to get its rates back to an adequate level over time by filing increases to its base rates. But, this approach might also end up with rates that are inadequate, excessive, or unfairly discriminatory for some policyholders if the windstorm mitigation discounts are overstated since those policyholders not receiving the discounts would be charged more premium to make up for any excessive discounts.

Comments Related to the My Safe Florida Home (MSFH) Program

The MSFH Program expired on June 30, 2009. The program resulted in 401,372 home inspections and \$82,650,215 in mitigation grant reimbursements by the Department of Financial Services, where the MSFH Program resides. Of the homeowners who received a free wind inspection, 55 percent (220,754 homes) were eligible for discounts averaging \$217. The average time for a home inspection took 47 minutes (Torres 2009a). In 2007, two percent of residential property insurance policies received windstorm mitigation discounts and this resulted in an average premium reduction per policy of one percent. A year later, the number of policies receiving discounts increased to 21 percent and the premium reductions averaged 13 percent. Two years later, 40 percent of all residential policies were receiving windstorm mitigation discounts and the average premium reduction was approximately 26 percent.

Of note, is that the base rates in insurer rate filings are intended to account for wind mitigation discounts. The relativities applied to individual policies are then used to distinguish between the various mitigated and non-mitigated structures and also the relative differences among the various mitigated structures. As such, the relativities should generally offset as a way to spread loss cost among risks and maintain actuarial soundness. If not, discrepancies are created that will need to be made up over the long run. This can be a problem for obtaining both rate adequacy and rate fairness (Miller, T 2009c).

Comments Related to Residential Inspection Process

For policyholders to obtain windstorm mitigation discounts, they are required to have a home inspection. OIR has adopted a Uniform Mitigation Verification Inspection Form, OIR-B1-1802 for use by a qualified inspector in inspecting a policyholder’s residential structure. The form does not include detailed instructions to assist inspectors in completing it, and it is valid for “*up to five (5) years provided no material changes have been made to the structure.*” OIR held a workshop on August 18, 2009, and a hearing on December 21, 2009, to solicit comments on the form. Under consideration is a requirement for photo documentation of mitigation features, a requirement for the property owner to verify that the inspection actually took place, and other revisions to eliminate fraud and mistakes in the mitigation discount inspection process.

A problem with the current system is that not all homes are required to be inspected, and for many of the homes that have been inspected, numerous errors are being recognized upon re-

inspection. Based on the reported results of re-inspection programs, there appears to be widespread fraud occurring in some geographic areas of the state. The error rates revealed in re-inspection reports indicate that errors range as high as 55-80% depending on the region of the state (Florida Association of Insurance Agents 2009). The system lacks checks and balances, there are no audit requirements, there is very little accountability, and the system invites abuse and inefficiencies.

The forms used by home inspectors do not have adequate or clear instructions and allow for the use of “judgment” and various interpretations in many instances. Honest mistakes are common as well. There is a lack of consistent training and an absence of clear standards for guidance. Currently, no specific licensing or certification requirements have been established for home inspectors. A large number of individuals given their association with construction or construction practices have been recognized as “qualified” inspectors. Training and instruction is limited and apparently inadequate given the results of various re-inspections.

Due to concerns over the accuracy of windstorm mitigation discounts resulting from previous inspections, Citizens recently implemented a residential structure re-inspection program for a portion of its business. It has been reported that “nearly a dozen” other insurers have initiated re-inspection programs as well (Garcia 2009c).

Problems Specific to the Ratemaking Process

During the public hearing process the Commission received testimony identifying a number of problems and issues. Regarding the ratemaking process and the implementation of windstorm mitigation credits:

- Various factors are putting pressure on insurer costs at the same time that the public is demanding more and more rate relief in a difficult economy. The fairness and adequacy of rates is an important issue. Those policyholders with high risk exposures should pay for the cost of their exposure, but what they are charged should be fair and based on the best actuarial and scientific approaches rather than merely shifting cost from one set of policyholders to another.
- The translation from windstorm mitigation relativity to windstorm mitigation credit is one of the root causes of the current problems.
 - The decision by the OIR to use the weakest structure rather than the average structure for the mitigation credit base meant that the weakest structure received no credit while increasing the windstorm mitigation credit for the strongest structures (using the average structure would have resulted in credits for the stronger structures and surcharges for the weaker structures). This resulted in no additional charge for the weakest structure while the strongest structure qualified for credits in excess of 80 percent (Terrain B). Using the average structure would have resulted in a surcharge of 137 percent for the weakest structure and a credit of 58 percent for the strongest structure. The financial impact of using the weakest structure as the base became problematic as rate offsets (increases) were not available.¹⁵

¹⁵ In response to Emergency Rule 69OER7-1, F.A.C., OIR Informational Memorandum OIR-07-03M states, “Consequently, the windstorm mitigation discount filing shall not include any modification of the rating factors or base rates for any purpose, including the offset of revenue impact on current business.”

- In its 2008 study, Applied Research Associates (ARA) discusses the implementation of windstorm mitigation relativities stating, “Applying the loss relativities as rate differentials avoids the problems associated with a credit program that is based on normalization of relativities to the weakest structure.”
- Market distortions resulted from the OIR’s decision in 2007 to disallow the Insurance Services Office (ISO) rate filing because ISO mitigation credits differed from those published by the OIR (based on the ARA relativities).¹⁶ The OIR had previously approved ISO rate filings based on modeling from AIR Worldwide. The OIR has indicated that it would accept a “detailed” study to support an alternative approach to determine windstorm mitigation relativities.

Problems Specific to the Inspection Process

Regarding the residential structure inspection system there is an indication of substantial fraudulent behavior.

- While not a direct indication of inspection fraud, some home inspectors are advertising their services free of charge to policyholders if the inspector cannot obtain a windstorm mitigation discount.
- Some inspectors are providing other “package” deals for various non-related services as an enticement to attract business.
- Some inspectors are alleged to merely “drive by” in order to conduct the inspection. Other inspectors are reported to perform an incomplete inspection due to their failure to inspect the attic space.
- In some instances, home inspectors might not have entered the structure but merely filled out the inspection form while talking to the policyholder over the phone.
- Abuse of the system is not limited to residential structure inspectors, but also includes agents, insurance companies, and homeowners.
- The penalty for fraud and abuse of the system is apparently not as strong and/or as clear as it could be. In many cases, a misdemeanor would be the maximum penalty, which may not be enough to discourage perpetrators knowing that they can easily get away with certain unscrupulous activities and practices.

There also are indications of inspection problems unrelated to fraud.

- Some errors result from honest mistakes arising from ambiguities and judgment.
- The current windstorm mitigation discount system does not require all homes to be inspected.
- For many of the homes that have been inspected, numerous errors are being recognized upon re-inspection.
- The quality of data is poor and impacts both hurricane computer modeling results and the validity of actual windstorm mitigation discounts being granted to consumers. The error rates that have come to light from re-inspection reports indicate that errors range as high as 55-80 percent depending on the region of the state (Florida Association of Insurance Agents 2009).

¹⁶ OIR Notice of Intent to Disapprove, February 26, 2007.

RECOMMENDATIONS

The problems related to windstorm mitigation credits are complex and will not yield to a single solution. The recommendations provided below reflect this complexity which is driven by:

1. *The use of modeling to determine the impact of various mitigation features on expected loss cost.* Modeling plays an important role in determining mitigation relativities and hurricane loss costs. As such, the same concerns about transparency and assumptions that apply to hurricane loss models also apply to a modeling process that produces mitigation relativities. Although the number of basic mitigation combinations is small, the number of individual mitigation characteristics/features and combinations potentially can be quite large.
2. *The translation of mitigation relativities to mitigation credits.* Moving from windstorm mitigation relativities to windstorm mitigation credits involves some type of a translation process. Normalizing the credits to a specific structure type also further moves the ultimate credit further from the original overall relativity.
3. *The application of mitigation credits into the ratemaking process.* Because the insurer and insured are not generally fully informed as to the windstorm mitigation features at the structure level, the rates used are developed at a higher (geographic) level and reflect assumptions and averages about the mitigation characteristics of the housing stock at this level.
4. *Gathering information regarding the insured population and reflecting that in the ratings.* The effort involved and resources required to gather information on the housing stock are substantial. As such, solutions involving gathering information need to address which parties to the insurance contract should bear this cost. Beyond costs, there may be privacy concerns related to gathering structure specific data and providing access to that data. Even absent privacy concerns, general access questions would need to be addressed.
5. *Potential inspection fraud in determining windstorm mitigation credits.* The presence of substantial inspection fraud impacts the insurance system at several levels. If consumers are receiving more windstorm mitigation credits than they qualify for based on expected costs savings, then premium levels are not sufficient. Following an event, these structures are likely to perform at a lower level (i.e., higher losses) than expected. This in turn could call into question the validity of windstorm mitigation credits and the relativities that were used to develop the credits.

The Commission makes the following recommendations based on four specific areas of concern: 1) the application of mitigation credits into the ratemaking process, 2) a flawed residential structure inspection process, 3) incomplete and poor data quality, and 4) hurricane computer modeling limitations.

1. ***Rating and the Determination of Windstorm Mitigation Discounts*** – The process of assessing, determining, and applying windstorm mitigation discounts has resulted in tensions between insurers and regulators. The fairness and adequacy of rates are important issues. Windstorm mitigation discounts should be fair and based on the best actuarial and scientific approaches rather than merely shifting cost from one set of policyholders to another.

The Commission recommends the following:

- a. The role of the Office of Insurance Regulation should be limited to the review of rate filings. Windstorm mitigation relativities and discounts should be incorporated in the hurricane computer modeling review process. The Florida Commission on Hurricane Loss Projection Methodology should determine the appropriate windstorm mitigation standards and review models according to those standards.
- b. The determination and application of windstorm mitigation discounts applied to a policyholder's rates should be actuarially appropriate.
- c. The base rates and the mitigation plan need to be balanced to achieve adequate rates. The current application of windstorm mitigation credits should be modified to allow the insurance company to also use debits if more appropriate given their base rates.
- d. Mitigation features should be considered separately for Coverage A (structure), Coverage B (external structures), Coverage C (contents only), and Coverage D (additional living expense).
- e. Windstorm mitigation discounts should only apply to that portion of the premium affected by the mitigation features.
- f. Larger deductibles should be applied to wind losses if windstorm mitigation features such as shutters are not used at the time of a loss.

2. ***The Residential Structure Inspection Process*** – In the process of re-inspecting residential structures, numerous errors have been found. Some of these errors are related to inspection fraud while others are a byproduct of the process or the level of expertise of the inspector.

The Commission recommends the following with regards to inspection fraud:

- Statutory penalties should be increased to the level of a felony for conviction of fraudulent activities.

More broadly, the Commission recommends that the current residential structure inspection process be replaced with an independent inspection organization that would provide oversight and administer all aspects of the inspection process. Its sole purpose would be to ensure complete, unbiased, and the highest quality data on residential structures. The board of this independent inspection organization would consist of experts that understand windstorm mitigation of residential structures, data collection, hurricane modeling, insurance and reinsurance underwriting, and the inspection of residential structures. The My Safe Florida Home Program is a possible model for this organization which would operate as follows:

- a. A data base or data archive would be created and maintained so that various queries can be run regarding inspectors, mitigation features, and other relevant factors for the purpose of allowing access to the data for modeling and premium calculations. In addition, the data could be used to audit the inspection process.
- b. Residential structures should be inspected periodically (e.g., every five or ten years) in order to be entitled to continued windstorm mitigation discounts for those mitigation features that cannot be verified by photograph or other less expensive means. This will facilitate error correction and monitoring of mitigation features that deteriorate with age of the installation.

- c. An inspector pool would be created and each inspector would be certified by the independent inspection organization based on meeting various standards, background, training, and experience requirements. An inspector could be de-certified for poor performance.
 - d. A phase-out and phase-in period would be needed until the independent inspection organization could be up and running. It is recommended that insurers continue their re-inspection programs and strive to correct errors. Each inspector should have a unique identification number that should appear on all work products to help identify fraudulent activities.
3. **Data Quality** – As noted above, concerns about data include the lack of current data on the direct impact of windstorm mitigation credits on insurers and the level of mitigation credit activity at the exposure level. Additionally, significant concerns exist about the impact that inspection related inaccuracies will have on future loss data. In general, little consideration has been given to the quality and completeness of data.

The Commission recommends that policies and procedures be put in place to ensure complete and high quality data. The data should be consistent with hurricane computer modeling needs and sufficient for the level of “granularity” required for modeling. These include the following:

- a. All residential structures in the state should ultimately be inspected and the results entered into a centralized database which is publicly available subject to privacy issues.
 - b. On-line data collection systems need to be utilized that have built-in data and edit checks.
 - c. Re-inspections of residential structures should be conducted on a random sample of the residential structures to establish an error rate as a base line for quality improvement measurement purposes.
 - d. In order to provide data that can serve to document the current impact of windstorm mitigation on rates (pre-2007 to 2009), to establish benchmarking data on windstorm mitigation, and to serve as validation windstorm mitigation data for modelers, a data call should be implemented to collect the necessary ratemaking and financial data at the ZIP Code level.
4. **Hurricane Computer Modeling** – Although the currently accepted hurricane loss models have met standards regarding the projection of loss costs and probable maximum loss levels, they have not been reviewed in depth for their ability to model windstorm mitigation relativities as applied to policies on individual residential structures. This would require an expanded role for the Commission.

The Commission recommends the following:

- a. The current statute regarding the Commission, s. 627.0628, F.S., should be modified to:
 1. task the Commission with developing the appropriate mitigation standards,
 2. add a structural engineer to the Commission, and

DRAFT: 1/21/10 – This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

3. revert the Commission’s process of developing standards back to an annual basis rather than “every odd year.”¹⁷ This would expedite the development of the appropriate mitigation standards and the implementation of the windstorm mitigation discounts based on the revamped system.
- b. Insurers should use the same hurricane computer simulation model for developing windstorm mitigation discounts as they do for developing loss costs.

Finally, the Commission recommends that the uniform home grading system be repealed since it is not feasible and presumes a level of accuracy that does not currently exist.

CONCLUSIONS

Since the residential property insurance market is complex, the state of Florida has a number of worthwhile objectives and goals that need to be considered and simultaneously achieved. These include the need for solvent and financially stable insurers; the need to depopulate the residual market (Citizens Property Insurance Corporation); the need for fair, actuarial, and scientifically sound windstorm mitigation discounts for policyholders; the need to reduce future wind losses and protect Florida families with hardened residential structures; the need to eliminate fraud, abuse, adverse selection, and moral hazard from the system; the need for complete, unbiased, quality data on all residential structures; and the need to have credible windstorm mitigation discounts based on reliable and scientifically based hurricane loss models.

After hearing testimony, reviewing reports, and considering other available data and information, the Commission concludes that the current system for assessing, determining, and applying windstorm mitigation discounts has failed to operate as intended and has contributed to problems in the residential property insurance marketplace. It is important to recognize that this report highlights the systemic problems associated with windstorm mitigation credits and not the long-term benefits that windstorm mitigation efforts should provide. From a public policy perspective, mitigation efforts to reduce catastrophic exposure to wind continue to be important. However, other methods for financing or incentivizing property owners need to be considered as it is clear that relying on the insurance system as the primary funding source for mitigation via credits is not sustainable.

As noted above, the current problems are complex and systemic in nature. While some of the solutions described above can be implemented in the near term, most of them will take additional time if they are to be implemented properly. Any interim measures should be implemented to help prevent the current system from deteriorating further. The Commission’s work has focused on improving and refining the current process involving windstorm mitigation discounts. It will be the decision of the Legislature whether to implement some or all of the Commission’s recommendations.

The Commission believes these recommendations, in the long-run, will help lead to:

- 1) Less fraud, less moral hazard, and less abuse in the system,

¹⁷ The 2009 Legislative Session changed s. 627.0628, F.S., to require standards be adopted every odd year rather than every year.

DRAFT: 1/21/10 – This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

- 2) A higher quality of data that includes complete and accurate information on every residential structure in Florida,
- 3) More efficient and refined hurricane loss models,
- 4) An improved and more equitable rating system for all parties,
- 5) A more financially sound private insurance market,
- 6) A healthier Florida residual insurance market, and
- 7) Hardening residential structures to better withstand future windstorm losses.

REFERENCES

1. “A.M. Best Downgrades State Farm Florida; Outlook Negative.” Insurance Journal 18 Jun. 2009. <<http://www.insurancejournal.com/news/southeast/2009/06/18/101518.htm>>.
2. Applied Research Associates, Inc. “Development of Loss Relativities for Wind Resistive Features of Residential Structures.” FLOIR.com. 28 Mar. 2002. <<http://www.floir.com/Hurricanes/ARAWindmitigation.pdf>>.
3. ---. “Evaluation and Report on the Insurability of Attached and Free Standing Structures.” FLOIR.com. 1 May 2007. <<http://www.floir.com/pdf/insurability.pdf>>.
4. ---. “2008 Florida Residential Wind Loss Mitigation Study.” FLOIR.com. Oct. 2008. <<http://www.floir.com/pdf/ARALossMitigationStudy.pdf>>.
5. Brown, Amy G. Letter to Jack Nicholson. 10 Sep. 2009.
6. Callaway, Katrina, et al. “House of Representatives Staff Analysis Bill # CS/CS/HB 1495 Insurance.” Florida House of Representatives. 18 Apr. 2009: 14-15. <<http://www.myfloridahouse.gov/Sections/Documents/loaddoc.aspx?FileName=h1495d.CGHC.doc&DocumentType=Analysis&BillNumber=1495&Session=2009>>.
7. Cleary, Kay. Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 29 Oct. 2009.
8. Curry, Rob. “ISO Presentation to Florida Hurricane Commission Regarding Mitigation.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology. Tallahassee, 17 Sep. 2009.
9. Delegal, Mark. “State Farm.” E-mail to Jack Nicholson. 18 Sep. 2009.
10. “Discounts, or No Deal for Insurers.” Editorial. Daytona Beach News Journal 14 Aug. 2009. <<http://74.125.113.132/search?q=cache:8W48uIaCSDgJ:www.news->

DRAFT: 1/21/10 — This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

journalonline.com/NewsJournalOnline/Opinion/Editorials/opnOPN15081409.htm+disco
unts+or+no+deal+for+insurers+daytona+beach+news+journal&cd=1&hl=en&ct=clnk&g
l=us>.

11. Dixon, Rick. “The Florida Building Code, Florida’s Response to Hurricane Risk.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology. Tallahassee, 17 Sep. 2009.
12. Don Meyler Inspections. Advertisement. 1 Oct. 2009. <http://www.windstorminspections.com/?gclid=CLmStZb_m50CFSduswod0AbS1g>.
13. Fair Insurance Rates in Monroe. Public Testimony. Florida Commission on Hurricane Loss Projection Methodology. Tallahassee, 12 Aug. 2009.
14. Fischer, March. “Citizens Property Insurance Corporation, Windstorm Mitigation Credit Information.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology. Tallahassee, 17 Sep. 2009.
15. ---. “Citizens Property Insurance Corporation, Exposure as of December 31, 2008, Scenario Comparisons (Gross Average Annual Loss) Modeled Totals by Account.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology. Tallahassee, 17 Sep. 2009.
16. Florida Association of Insurance Agents. “Mitigation, A Report Card on Florida’s Quest to Harden Homes.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 12 Aug. 2009.
17. ---. “Mitigation, A Report Card on Florida’s Quest to Harden Homes.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology. Tallahassee, 17 Sep. 2009.

DRAFT: 1/21/10 — This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

18. ---. “Reinspection Best Practices.” Florida Association of Insurance Agents. Dec. 2009. 8 Dec. 2009. <<http://www.faia.com/core/contentmanager/uploads/Public%20Relations/Agents%20Confidential%20PDFs/2009-2010%20Vol.%20LIX/Reinspection%20Best%20Practices.pdf>>.
19. Florida Catastrophic Storm Risk Management Center. The College of Business. Florida State University. 18 Dec. 2009. <<http://www.stormrisk.org/>>.
20. Florida Statutes. Title XIV, ch. 215, s. 215.55865 (2009).
21. Florida Statutes. Title XXXVII, ch. 627, s. 627.0628 (2009).
22. Florida Statutes. Title XXXVII, ch. 627, s. 627.0629 (2009).
23. Florida Statutes. Title XXXVII, ch. 627, s. 627.711 (2009).
24. Florida Wind Inspections. Advertisement. 1 Oct. 2009. <<http://www.picflorida.net/>>.
25. Florida Wind Mitigation Inspections. Advertisement. 1 Oct. 2009. <<http://floridamitigationinspections.com/>>.
26. Franco, Phillip. Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 29 Oct. 2009.
27. Frank, John and Shannon Colavecchio. “Lawmakers Push to Deregulate Insurance.” Miami Herald. 8 Dec. 2009. <<http://www.miamiherald.com/news/politics/florida/story/1372469.html>>.
28. Garcia, Beatrice E. “Florida May Gut Discounts for Hurricane Shutters.” Miami Herald 8 Aug. 2009. <<http://www.miamiherald.com/business/story/1178070.html>>.
29. ---. “Northern Capital Group Branches Out to Spread Risk.” Miami Herald 14 Sep. 2009. <<http://www.miamiherald.com/103/story/1231326-p2.html>>.

DRAFT: 1/21/10 — This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

30. ---. “Insurers Reducing, Eliminating Discounts for Storm Fortifications.” Miami Herald 23 Nov. 2009. <<http://www.miamiherald.com/news/florida/story/1346091.html>>.
31. Harrington, Jeff. “Mild Hurricane Season Won’t Save Homeowners From Higher Insurance Rates.” St. Petersburg Times. 2 Oct. 2009. <<http://www.tampabay.com/news/business/banking/mild-hurricane-season-wont-save-homeowners-from-higher-insurance-rates/1040837>>.
32. “Hearing on State Farm Florida Exit Plan Postponed Until January.” Insurance Journal. 2 Dec. 2008. <<http://www.insurancejournal.com/news/southeast/2009/12/02/105666.htm>>.
33. Hemenway, Chad. “Without the Wind Blowing, Florida Insurers Struggle to Hang On.” Advisen Front Page News. 22 Oct. 2009. <http://fpn.advisen.com/?resource_id=104863838-91625521#top>.
34. Johnson, Scott. “Re: Windstorm Mitigation Discount Meeting.” E-mail to Donna Sirmons. 22 Sep. 2009.
35. Koedel, Scott. “Ensuring the Accuracy of Windstorm Mitigation Credits.” Florida Underwriter. Sep. 2009. <<http://www.floridaunderwriter.com/Issues/2009/September%202009/Pages/Ensuring-the-Accuracy-of-Windstorm-Mitigation-Credits.aspx>>.
36. ---. “Don Meyler Inspections Florida Commission on Hurricane Loss Project Methodology Presentation.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology. Tallahassee, 17 Sep. 2009.
37. Kruck, Werner. Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 12 Aug. 2009.

DRAFT: 1/21/10 — This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

38. ---. “Security First Insurance, Wind Loss Mitigation.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 29 Oct. 2009.
39. Lavelle, Francis M. “Issues with Multiple Models, Mitigation Rate Filings, and Inspection Accuracy.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 29 Oct. 2009.
40. Letcher, Michael. “Here’s What State Farm Florida Policyholders are Doing Who Don’t Want to be Surprised.” Article Alley. 15 Apr. 2009. 10 Dec. 2009. <http://www.articlealley.com/print_858176_19.html>.
41. Marshall & Swift/Boeckh. “Business Position Paper Presented to the Florida Commission on Hurricane Loss Projection Methodology.” Tallahassee, 18 Dec. 2009.
42. McCarty, Kevin. “Commissioner’s Presentation Cabinet Meeting September 15, 2009.” FLOIR.com. 15 Sep. 2009 <<http://www.floir.com/pdf/FSCTalkingPoints09152009.pdf>>.
43. ---. “Update on the Florida Property Market.” FLOIR.com. 6 Oct. 2009 <<http://www.floir.com/pdf/FLPropertyMarketPresentation10062009.pdf>>.
44. McChristian, Lynne. “Mitigation Discounts – Are They “On the Money”?” Florida Underwriter Sep. 2009: 14.
45. Miller, Belinda. “Mitigation Discounts.” Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 12 Aug. 2009.
46. ---. Public Testimony. Florida Commission on Hurricane Loss Projection Methodology. Tallahassee, 17 Sep. 2009.
47. ---. “List of Windstorm Loss Reduction Credits Filings.” Email to Donna Sirmons. 20 Oct. 2009.

DRAFT: 1/21/10 – This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

48. ---. Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 29 Oct. 2009.
49. Miller, Lisa. Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 12 Aug. 2009.
50. ---. “Inspection Background.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 29 Oct. 2009.
51. ---. Letter to the author. 16 Nov. 2009.
52. Miller, Travis. “Interpretation and Implementation of Section 627.0629 and Associated Rules.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 12 Aug. 2009.
53. ---. “Summary of Statutes and Rules Governing Windstorm Loss Mitigation Discounts.” Memorandum to the author. 24 Aug. 2009.
54. ---. “Current Issues in the Interpretation and Implementation of Florida’s Residential Insurance Mitigation Discounts.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 29 Oct. 2009.
55. Nehr, Peter. “Florida Windstorm Insurance Mitigation Needs Repair.” St. Petersburg Times 4 Nov. 2009. <<http://www.tampabay.com/opinion/columns/article1049098.ece>>.
56. Nyce, Chuck. “Subsidies in Property Insurance.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology. Tallahassee, 17 Sep. 2009.
57. O’Boyle, R. J. Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 12 Aug. 2009.

DRAFT: 1/21/10 — This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

58. Palumbo, Paul. "Citizens' Rate Development and Impact of Wind Mitigation Credits." Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 12 Aug. 2009.
59. ---. "Windstorm Mitigation Discount Presentation Summary." Letter to the author. 21 Aug. 2009.
60. Patel, Julie. "Florida Home Insurers Get Head-Start on Advocating Laws to Increase Premiums." Sun-Sentinel [Fort Lauderdale, FL] 12 Aug. 2009. <http://pqasb.pqarchiver.com/sun_sentinel/access/1828156211.html?dids=1828156211:1828156211&FMT=ABS&FMTS=ABS:FT&date=Aug+12%2C+2009&author=Posted+by+Julie+Patel+on+August+12&pub=South+Florida+Sun+-+Sentinel&edition=&startpage=Web&desc=FLORIDA+HOME+INSURERS+GET+HEAD-START+ON+ADVOCATING+LAWS+TO+INCREASE+PREMIUMS>.
61. Pearce, Cecil. Letter to the author. 22 Oct. 2009.
62. Petrelli, Joseph. "Request from Windstorm Association." E-mail to Lisa Miller. 10 Dec. 2009.
63. "Protect Insurance Discounts." Editorial. St. Petersburg Times 11 Aug. 2009. <<http://www.tampabay.com/opinion/editorials/article1026824.ece>>.
64. Repetto, Colleen. Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 12 Aug. 2009.
65. Reynolds, Liz. Letter to the author. 16 Sep. 2009.
66. ---. Public Testimony. Florida Commission on Hurricane Loss Projection Methodology. Tallahassee, 17 Sep. 2009.

DRAFT: 1/21/10 — This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

67. Ritzenthaler, Ken. Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 12 Aug. 2009.
68. ---. Public Testimony. Florida Commission on Hurricane Loss Projection Methodology. Tallahassee, 17 Sep. 2009.
69. ---. "List of Windstorm Loss Reduction Credits Filings." E-mail to Donna Sirmons. 19 Oct. 2009.
70. ---. "Relativities Question." E-mail to Donna Sirmons. 29 Oct. 2009.
71. Rollins, John. "Hurricane Loss Mitigation: Reloading the Silver Bullet." Public Testimony. Florida Commission on Hurricane Loss Projection Methodology. Tallahassee, 17 Sep. 2009.
72. ---. "A Modern Architecture for Residential Property Insurance Ratemaking." Proc. of Casualty Actuarial Society Spring Meeting, Vol. XCII, Numbers 176 & 177, 2005.
73. Rowan, Michael. "Hurricane Mitigation, The Inspectors Perspective...." Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 12 Aug. 2009.
74. Saunders, Jim. "Why Your Rates Keep Rising Even Without Hurricanes." Daytona Beach News Journal 29 Nov. 2009. <<http://www.news-journalonline.com/special/slammed/frtHEAD01CANE112909.htm>>.
75. ---. "Hurricane-Proofing Discounts Attacked by Insurance Industry." Daytona Beach News Journal 3 Dec. 2009. <<http://www.news-journalonline.com/NewsJournalOnline/News/Headlines/frtHEAD01120309.htm>>.

DRAFT: 1/21/10 – This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

76. Scourtis, Peter. “Florida Homeowners Ratemaking, Impact of Mitigation Credits.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology. Tallahassee, 17 Sep. 2009.
77. ---. “Moving From a Partially Informed Market to Fully Informed.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 29 Oct. 2009.
78. Shelley, Missy. “Ratemaking 101...plus Mitigation Rating.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 12 Aug. 2009.
79. ---. “Melissa Shelley Mitigation Ratemaking Presentation to Commission, August 12, 2009 – Requested Summary.” Letter to the author. 24 Aug. 2009.
80. Sirmons, Donna. “Additional Ratemaking Slides.” E-mail to the author. 1 Sep. 2009.
81. ---. “Windstorm Mitigation Section of Citizens Rating Manual.” E-mail to the author. 1 Sep. 2009.
82. ---. “QUASR Data.” E-mail to the author. 30 Nov. 2009.
83. State of Florida. Dept. of Financial Services. My Safe Florida Home. My Safe Florida Home 2008 Annual Report. 1 Feb. 2009. 20 Jan. 2010. < <http://www.mysafefloridahome.com/education.asp>>.
84. State of Florida. Dept. of Financial Services. Office of Insurance Regulation. Informational Memorandum OIR-03-001M. 23 Jan. 2003. 7 Aug. 2009 <<http://www.floir.com/Memoranda/OIR-03-001m.pdf>>.
85. ---. Informational Memorandum OIR-05-22M. 8 Dec. 2005. 7 Aug. 2009 <<http://www.floir.com/Memoranda/OIR-05-022M.pdf>>.

DRAFT: 1/21/10 – This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

86. ---. Informational Memorandum OIR-07-03M. 27 Feb. 2007. 7 Aug. 2009 <<http://www.flor.com/Memoranda/OIR-07-03M.pdf>>.
87. ---. OIR-B1-1699 (10-06) Windstorm Mitigation Discounts – Single Family Residence, Rule 69O-170.017. 17 Dec. 2006. 7 Aug. 2009 <<http://www.flor.com/Hurricanes/OIR-B1-1699.xls>>.
88. ---. OIR-B1-1700 (10-06) Windstorm Mitigation Discounts; Non-Single Family Residences, Rule 69O-170.017. 17 Dec. 2006. 7 Aug. 2009 <<http://www.flor.com/Hurricanes/OIR-B1-1700.xls>>.
89. ---. OIR-B1-1802 (Rev. 07/09) Uniform Mitigation Verification Inspection Form. July 2009. 18 Aug. 2009. <http://www.flor.com/pdf/OIR-B1-1802_Rev_8-5-09.pdf>.
90. ---. Rule 69O-170.017 Windstorm Mitigation Discounts. 17 Dec. 2006. 7 Aug. 2009 <<https://www.flrules.org/gateway/RuleNo.asp?ID=69O-170.017>>.
91. ---. Rule 69OER07-1: Residential Property Insurance Rate Filings. 31 Jan. 2007. 7 Aug. 2009 <<https://www.flrules.org/gateway/readFile.asp?sid=4&tid=3558268&type=1&File=69OER07-1.doc>>.
92. State of Florida, Division of Emergency Management. “Florida Hurricane Loss Mitigation Program, Report to the Florida Legislature.” FLORIDADISASTER.org. 1 Jan. 2008 <<http://www.floridadisaster.org/Mitigation/Documents/RCMPAnnualRptSFY07-08-final-secured.pdf>>.
93. Torres, Tami. “My Safe Florida Home Program.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 12 Aug. 2009.
94. ---. “Windstorm Mitigation Discount Meeting.” E-mail to Donna Sirmons. 20 Aug. 2009.
95. ---. “Request for Information.” E-mail to Donna Sirmons. 1 Dec. 2009.

DRAFT: 1/21/10 — This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

96. Twisdale, L.A. “Wind Loss Mitigation/Rating Studies.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 12 Aug. 2009.
97. ---. “Wind Loss Mitigation Implementation Issues and Recommendations.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology. Tallahassee, 17 Sep. 2009.
98. Wilson, Thomas. “Florida Insurance Companies Seek to Limit Discounts.” First Coast News [Jacksonville, FL] 10 Aug. 2009. 10 Aug. 2009. <<http://www.firstcoastnews.com/weather/hurricane/news-article.aspx?storyid=143116&catid=322>>.
99. Wind Florida. Advertisement. 1 Oct. 2009. <<http://www.windflorida.net/pricing.html>>.
100. Wind Mitigation Inspections. Advertisement. 1 Oct. 2009. <<http://www.flwindinspections.com/cost.htm>>.
101. Wind Mitigation Inspections by AmeriPro. Advertisement. 1 Oct. 2009. <<http://www.windcertification.com/Common/Home.aspx>>.
102. Wind Mitigation Inspections by Echo. Advertisement. 1 Oct. 2009. <<http://www.echowindmitigation.com/>>.
103. Wind Mitigation Surveys by JP Enterprises. 1 Oct. 2009. <<http://www.windmitigationinspections.net/insurancediscounts.html>>.
104. Wind Mitigations. Advertisement. 18 Aug. 2009. <<http://windmitigations.com/images/WindMit-infolyer.pdf>>.
105. Wind Storm Discount. Advertisement. 1 Oct. 2009. <<https://windstormdiscount.com/rewards.html>>.

DRAFT: 1/21/10 – This is a working draft and does not represent the views or position of the Florida Commission on Hurricane Loss Projection Methodology.

106. Wind Storm Inspections. Advertisement. 1 Oct. 2009. <<http://www.windinspectionsflorida.com/>>.
107. Windstorm Consultant. Advertisement. 1 Oct. 2009. <<http://windstormconsultant.com/default.aspx>>.
108. Windstorm Mitigation Inspection by Atlantic Building Inspections, Inc. Advertisement. 1 Oct. 2009. <<http://atlanticbuildinginspections.com/windstorm.aspx>>.
109. Windstorm Wind Mitigation Inspection. Advertisement. 1 Oct. 2009. <<http://miami.olx.com/75-mo-pool-cleaning-bonus-discount-50-windstorm-wind-mitigation-inspection-786-443-8791-iid-37722736>>.
110. Young, Michael. “Analyzing the Effects of the My Safe Florida Home Program on Florida Insurance Risk.” RMS.com. 14 May 2009 <http://www.rms.com/publications/msfh_analysis_executive_summary_041309.pdf>.
111. ---. “RMS Observations on Florida Mitigation Credits.” Public Testimony. Florida Commission on Hurricane Loss Projection Methodology Meeting. Tallahassee, 12 Aug. 2009.
112. ---. Letter to the author. 28 Oct. 2009.