

**The Florida State University
Catastrophic Storm Risk
Management Center**

**Hurricane Mitigation Inspection System Study
(DFS CS RFP 09/10-10)**

FINAL REPORT



**THE FLORIDA STATE UNIVERSITY
COLLEGE OF BUSINESS**

Table of Contents

- Table of Contents 1
- Executive Summary 3
 - A Description of The Hurricane Inspection System Study Project 3
 - Overview of The My Safe Florida Home Program 3
 - Project Findings 4
- Recommendations Summary 6
 - General Recommendations 6
 - Certifying and Monitoring Inspectors and Quality Assurance 7
 - Certified Inspectors 8
 - Data Policies and Procedures 9
- List of Appendices 10
 - History of My Safe Florida Homes 10
 - Technical Specifications 10
- History of the My Safe Florida Home Program 11
 - Mitigation Discounts 11
 - My Safe Florida Home 12
 - Program Goals 13
 - Statutory Requirements 14
 - Pilot Phase 15
 - The Launch 16
 - MSFH Focal Points 19
 - Wind Inspections Outside of MSFH 22
- Technical Specifications 23
 - Technical Specification 1 24
 - The My Safe Florida Home (MSFH) screening process for inspectors 24
 - Private market inspector screening process 25
 - Comparison of MSFH and private market screening processes 25
 - Minimum Screening Standard Recommendations 26
 - Technical Specification 2 26
 - The My Safe Florida Home (MSFH) certification process for inspectors 26
 - Private market certification process 27
 - The Need for Certification & Recommendations 27
 - Technical Specification 3 28
 - Minimum qualification standards of MSFH inspectors 28
 - Minimum qualification standards of private market inspectors 29
 - Comparison of MSFH and private market minimum qualifications 32
 - Minimum Qualification Recommendations 33
 - Technical Specification 4 33
 - Training and continuing education requirements of the MSFH inspectors 33
 - Minimum training and continuing education requirements of private market inspectors 34
 - Comparison of MSFH and private market minimum training and continuing education requirements 35
 - Minimum Training and Continuing Education Requirements 35
 - Recommendations 35

Technical Specification 5.....	35
The MSFH program data policies and procedures	36
Private market inspector data policies and procedures	37
Comparison of MSFH and private market data policies and procedures	38
Data Policies and Procedures Recommendations	38
Technical Specification 6.....	39
The MSFH program anti-fraud procedures, processes or policies	39
The private market inspectors anti-fraud procedures, processes or policies	40
Comparison of MSFH and private market anti-fraud procedures, processes or policies	41
Best practices for anti-fraud procedures, processes or policies	41
Technical Specification 7.....	43
The MSFH quality assurance program	43
The private market inspectors' quality assurance programs	43
Comparison of MSFH and private market quality assurance programs	44
Minimum standards for a well-developed quality assurance program	47
Technical Specification 8.....	48
Problems in the marketplace.....	50

Executive Summary

A Description of the Hurricane Inspection System Study Project

In October 2009 the Department of Financial Services (DFS) issued a Request for Proposal (RFP) for the study of the hurricane mitigation inspection system in Florida and recommendations for improvement in the performance and oversight of the hurricane wind mitigation inspection process. The goal of the study was to research, review and recommend an infrastructure for the performance of hurricane mitigation inspections, including who should perform such inspections, how such inspections should be conducted, what processes, policies and procedures should be in place to optimize the effectiveness and efficiency of the hurricane mitigation system while preventing fraudulent activity.

Through the competitive bid process (RFP), DFS awarded the contract to The Florida Catastrophic Storm Risk Management Center, housed in The Florida State University's College of Business in conjunction with Panhandle Windstorm Inspection, Inc (PWI). The Storm Risk Center and PWI conducted a three-month study of both the MSFH and private windstorm inspection system in the state.

The study included on-line surveys of all stakeholders including inspectors, insurance agents and insurance companies. In addition, the study looked at re-inspection data to determine the overall effectiveness of the current system. It also included a detailed review of eight technical specifications and compared and contrasted the inspections processes, procedures and policies utilized in the My Safe Florida Home program and to those being utilized by private market inspection firms.

This report includes a detailed analysis of the study results and a summary of findings and recommendations on the eight technical specifications. It also includes the research, data and documentation collected during the study period.

Overview of the My Safe Florida Home Program

In the wake of eight devastating hurricanes that made landfall during the 2004 and 2005 seasons, the Florida Legislature in 2006 created the Florida Comprehensive Hurricane Damage Mitigation Program (later renamed the My Safe Florida Home Program) and appropriated \$250 million for the program. The Legislature mandated that the program focus on determining needed mitigation measures, reducing the vulnerability of residential properties to hurricane damage by identifying needed improvements to existing residential properties and determining what insurance premium discounts may be available. Over the next three years, the program performed 400,000 state-sponsored windstorm inspections and funded grants to assist homeowners in hardening their homes through the Department of Financial Services (DFS), local governments and nonprofit organizations. The program ended on June 30, 2009, as a result of the end of legislative funding. The MSFH program performed well in light of the extent of the mandate and the time frames given to complete 400,000 inspections, establish a quality control program, train wind inspectors, coordinate with local governments and nonprofits to

deliver inspections and grants, and adapt to changing mandates. Data gathering and storage tasks were immense. The program was a first of its kind with no blueprint or model in place to follow. A more detailed history of the MSFH program is contained in the report.

Reducing vulnerability and exposure to windstorm damage should be the primary foci of risk mitigation efforts in the state of Florida. Lessening the impact of natural disasters by saving lives, reducing injuries, and lowering property losses are tangible results of properly implemented mitigation programs. The MSFH program was a necessary component of a comprehensive long-term plan.

Project Findings

The primary findings of this project support the anecdotal evidence that error rates in the inspections conducted by private market windstorm inspectors are higher than the error rates found in the inspections conducted by certified inspectors in the MSFH program. Furthermore, the private market inspector error rates appear to be higher than the error rates found in inspections conducted by Wind Certification Entities (WCEs), regardless of whether those inspections were conducted inside of or outside the MSFH program.

The size of the market for private windstorm inspections is difficult to ascertain. The MSFH program conducted 400,000 inspections, which represent approximately 10% of the site built single family residences in the state. The reinspection information obtained from a private insurer only had 6.7% of the inspections conducted by WCEs which could have been done inside or outside of the MSFH program. This may indicate that private market inspectors are providing more than 90% of the inspections currently being submitted for insurance premium credits.

The findings also indicate a need for a high quality database of the wind mitigation features of the current housing stock in the state. All stakeholders, including public policy makers, insurers, reinsurers, Citizens Property Insurance Corporation (Citizens), Florida Hurricane Catastrophe Fund (Cat Fund), catastrophe modelers and property owners throughout the state will benefit from such a database. A better understanding of the property exposure throughout the state will remove some uncertainty in the pricing of catastrophic risk products and should lead to a lower cost of capital.

The MSFH inspectors and the private market windstorm inspectors have a number of similarities (and differences) in their professional development. The MSFH program instituted a number of policies and procedures to limit inspector fraud. Similarly, the private market inspectors that responded to the survey also report having significant fraud prevention policies in place. Table 1 highlights some of these similarities and differences between the inspectors.

Table 1: Inspector Comparison

	MSFH Inspectors	Private Market Inspectors
Certification	Required	Not required, however 61.36% of private market inspection firms responding to the survey have at least one inspector who completed the MSFH certification process.
Screening	Criminal background check, drug screening, variety of others	Not required, however more than 90% of private market inspection firms report using most or all of the same screening requirements as MSFH
Minimum Qualifications	2 years construction experience	None, except for signers of OIR 1802 forms
Training	Included in certification	None required, however more than 63% of private market inspection firms report that inspectors receive training outside of MSFH training
Continuing Education	None required, however technical bulletins were issued and a re-certification class was conducted	None required, however more than 97% of private market inspection firms report requiring training and/or continuing education

Recommendations Summary

The recommendations summarized in this section are supported by the analysis contained in the technical specifications section. Our recommendations can be grouped into the following categories:

- General
- Certifying and Monitoring Inspectors and Quality Assurance
- Certified Inspectors
- Data Policy and Procedures

General Recommendations

1. Long-Term Plan Development - The state needs to develop a long-term plan for managing the catastrophic windstorm risk to which the state is exposed. A proactive approach will avoid unintended consequences that may result from an ad hoc approach. The following recommendations regarding the inspection process need to be considered as part of this plan.
2. Mandatory Inspections - As part of this long-term plan every insured property needs to be periodically inspected (e.g. every 5 years or during a real estate transaction) for windstorm mitigation features. These inspections are necessary for the following reasons:
 - a. All stakeholders (policymakers, insurers, reinsurers, Citizens Property Insurance Corporation (Citizens), catastrophe modelers, Florida Hurricane Catastrophe Fund (Cat Fund), homeowners) need a better understanding of the state's exposure to catastrophic windstorm damage.
 - i. Policymakers need more information when making decisions regarding exposure to catastrophic storm damage and its impact on issues such as population growth, economic development, or emergency response.
 - ii. Insurers, reinsurers, Citizens, and the Cat Fund need a better understanding of the properties that make up the existing housing stock and their books of business.
 - iii. Catastrophe modelers need more accurate data to develop more realistic models for estimating future catastrophe losses.
 - iv. Removing uncertainty from the exposure measures should lower the cost of capital associated with financing catastrophic risk.
 - b. An important goal of an inspection system should be to eliminate moral hazard incentives and reduce the size of the residual market.
3. Dispute Resolution – With mandatory inspections, a dispute resolution process needs to be considered for property owners who disagree with inspection results. A process similar to the Department of Financial Services Rule 69JER06-01, “Mediation Procedures for Resolution of Disputed Personal Lines Insurance Claims Arising from the 2004 and 2005 Hurricanes and Tropical Storms” could be established to resolve disputes regarding the inspection results and appropriate credits.

4. Centralized Oversight – The windstorm mitigation inspectors should be certified by a central monitoring and data collection agency.
5. Certified Inspectors - All windstorm mitigation inspections should be completed by certified inspectors.
6. High Quality Data Collection – Developing a long-term plan for managing Florida’s catastrophic risk exposure is hampered by poor data quality and inefficient gathering and storage practices. A data collection system that is accessible, flexible and user friendly is vital to the future risk management of catastrophic storm exposures.
7. The Financial Services Commission should adapt the new OIR-B1-1802 (Rev. 02/10) form – the new form requires photo documentation of mitigation features and includes language notifying the inspector and homeowner of the criminal penalties for fraud.

Certifying and Monitoring Inspectors and Quality Assurance

8. A centralized oversight agency to certify and monitor inspectors as well as provide data collection, storage and dissemination is recommended. The Florida Commission on Hurricane Loss Projection Methodology report on Windstorm Mitigation Credits recommended a third party entity be used to manage the property inspection process. This entity could be housed in a state agency or an independent third party. An appropriate state agency could be the Department of Business and Professional Regulation. That agency is currently engaged in licensing programs in other disciplines. This approach could help minimize the cost to the system and minimize duplication and additional bureaucracy.
9. The central agency will be responsible for:
 - a. Certification, continuing education and discipline of inspectors.
 - b. Assigning inspectors to properties that require inspection. There are a variety of methods used in other areas that can serve as a model for assigning properties to be inspected to certified inspectors. Some methods include:
 - i. Random Assignment - Initially inspections can be randomly assigned to certified inspectors in the geographical area. Once quality assurance reinspections have been completed to a level sufficient to assess an inspector’s past performance, inspection assignments can be more heavily weighted to those inspectors who have superior past performance.
 - ii. Insurer Approved Inspectors – Similar to Workers’ Compensation insurance, have the insurers create a list of approved inspectors for their insureds. Then the insured can choose from that list, or the inspector can be randomly assigned from within that list.
 - c. Collecting the inspection fees from insurers and property owners and paying inspectors to remove the moral hazard incentives currently in the private windstorm inspection market.

- d. Centralized data collection, storage, and dissemination of information to stakeholders (state and local government, insurers, reinsurers, state run insurers, etc...) subject to privacy concerns.
- e. Quality assurance through a reinspection program. The reinspection program can be random at first, but should be adjustable based on an inspector's past performance.

Certified Inspectors

10. Inspections should be conducted by certified inspectors only. To ensure quality, those conducting the inspections should be subject to adequate certification requirements, in conjunction with screening, minimum qualifications, and continuing education requirements as necessary.
11. The person signing the OIR 1802 form should be the inspector who personally completed the inspection.
12. Increase the fraud penalties on inspectors to the felony level.
13. Individuals can become certified inspectors through:
 - a. Stand-alone Certification – any individual may take the full certification course and be awarded certification when they pass the final examination with a qualifying score.
 - b. Professional Licensure and Certification – any individual holding one of the following professional licenses will be awarded certification by taking the shorter certification course and passing the final examination with a qualifying score:
 - i. Architect
 - ii. Engineer
 - iii. Building inspector
 - iv. General contractor
 - v. Home inspector¹
14. The screening process needs to remain an integral part of the inspection process in conjunction with certification, training and continuing education. To maintain the safety and security of property owners who allow inspectors onto the property and minimize the state's liability for any inappropriate inspector behavior, inspector screening should enhance the My Safe Florida Home (MSFH) screening processes with random drug testing of inspectors, employer notification of criminal convictions, and annual updating of all of the required records in the inspector files.
15. The extent of training required for certified inspectors should depend on background, with a more thorough training course for those individuals who do not hold professional licensure and a shorter course for those individuals holding professional licensure in one of the fields listed above.

¹ Home inspectors are subject to licensure beginning in July 2010. The inclusion of home inspectors on this list is subject to that licensure taking effect.

16. Training courses need to be offered frequently enough to ensure a minimum backlog of applicants.
17. Consideration should be given to offering classroom and hands-on training as well as a written and field-based examination for certification.
18. Continuing education (CE) should be mandatory for certified inspectors with a periodic minimum number of CE hours determined to be adequate by the administering agency.

Data Policies and Procedures

19. The Florida Commission on Hurricane Loss Projection Methodology recommended development of a central data storage and retrieval system. This study supports that recommendation. It is imperative that a secure, high quality database of information regarding Florida's housing stock exposure to catastrophic windstorm damage be developed.
20. The database needs to be electronically assessable (similar to the Department of Motor Vehicles or CLUE databases) for all relevant stakeholders and therefore should be developed with input from insurers, reinsurers, regulators, catastrophe modelers, the Cat Fund, and Citizens.
21. The database needs to properly address all privacy issues and concerns.

List of Appendices

History of My Safe Florida Homes

- H-1. Section 627.0629 F.S. (s.13, ch.93-410, Laws of Florida)
- H-2. Department of Insurance Rule (69O-170.017 F.A.C.)
- H-3. s.99, Ch. 2000-141, Laws of Florida
- H-4. 2002 ARA Studies – “Development of Loss Relativities for Wind Resistive Features of Residential Structures”
- H-5. Office of Insurance Regulation issued Informational Memorandum OIR-03-001M
- H-6. s.22, Ch. 2005-111 Laws of Florida
- H-7. OIR Informational Memorandum OIR-07-03M
- H-8. Task Force on Long-Term Solutions for Florida's Hurricane Insurance Market Report March 2006.
- H-9. Section 215.5586 F.S., Florida Comprehensive Hurricane Damage Mitigation Program
- H-10. My Safe Florida Home 2007 Annual Report
- H-11. My Safe Florida Home 2008 Annual Report
- H-12. My Safe Florida Home Pilot Program Close-Out Report, The Federal Alliance for Safe Homes, Inc. – FLASH
- H-13. Kerr & Downs Research Report, My Safe Florida Home Program Pre- and Post- Public Education Campaign Evaluation for 2008
- H-14. Quality Assurance Report: Wind Certification Entities Performing Inspection Services for the My Safe Florida Home Program (October 29, 2007)
- H-15. Quality Assurance Report: Wind Certification Entities Performing Inspection Services for the My Safe Florida Home Program (June 25, 2009)
- H-16. Homeowners Report generated by My Safe Florida Home
- H-17. List of Private Market Wind Inspection Firms

Technical Specifications

- TS-1. Agents Survey
- TS-2. Inspectors Survey
- TS-3. Insurer Survey
- TS-4. WCE Survey
- TS-5. Technical Bulletins
- TS-6. Inspector Resource Manual
- TS-7. Inspector Survey Checklists
- TS-8. Citizens’ Personal Lines Reinspection Preliminary Report

History of the My Safe Florida Home Program

Mitigation is a valuable tool that can be utilized to lessen damages resulting from catastrophic events. Because of the upfront costs associated with mitigation, incentives are often used to promote mitigation. These incentives may include, *inter alia*, tax credits, mitigation grants, and premium credits. To avoid giving insurance premium discounts to unqualified property, windstorm mitigation features need to be verified. The only method of verifying the existence of construction features that mitigate the damage done by windstorms on the current housing stock is physical inspection of the properties. While windstorm mitigation discounts have been around in Florida since the 1990s, mitigation inspections did not begin in earnest until 2005 when the Legislature mandated that all policies must contain information on the discounts. The advent of the My Safe Florida Home (MSFH) program caused the number of inspections to dramatically increase as the inspections were offered free to homeowners of single family dwellings. In addition, the MSFH program raised awareness of the inspections and caused a surge in private market inspections. The following is a history of the mitigation discounts and the MSFH program.

Mitigation Discounts

Hurricane Andrew in 1992 severely disrupted the Florida property insurance market. In 1993, as part of a bill addressing the property insurance availability crisis that resulted from Hurricane Andrew, the Florida Legislature enacted section 627.0629, Florida Statutes, to require rate filings for residential property insurance to include appropriate discounts, credits, or other rate differentials, or appropriate reductions in deductibles, for properties that contained windstorm features. (s.13, ch.93-410, Laws of Florida, see Appendix H-1).

In 1997 the Department of Insurance issued a rule (69O-170.017 F.A.C., see Appendix H-2) that required discounts for shutters or other wind mitigation devices or fixtures at least equal to the discounts promulgated by any statewide rating organization. At the time, this requirement was tantamount to requiring discounts to be at least equal to the Insurance Services Office discounts.

In 2000 section 627.0629, Florida Statutes, was amended to provide rate filings for residential property insurance that must include “actuarially reasonable” (rather than appropriate) discounts, credits, or other rate differentials, or appropriate reductions in deductibles, for properties on which fixtures “or construction techniques” demonstrated to reduce the amount of loss in a windstorm have been installed “or implemented.”

New language added to the statute stated that fixtures or construction techniques shall meet the requirements of the Florida Building Code and shall include “fixtures or construction techniques which enhance roof strength, roof covering performance, roof-to-wall strength, wall-to-floor-to-foundation strength, opening protection, and window, door, and skylight strength.” The language required all insurance companies to “make a rate filing which includes the credits, discounts, or other rate differentials by June 1, 2002” (s.99, ch.2000-141, Laws of Florida, see Appendix H-3). The Legislature subsequently amended the law and changed the filing date to December 31, 2002, and then to February 28, 2003.

In September 2001, the Florida Department of Community Affairs contracted with Applied Research Associates (ARA) to evaluate the effectiveness of wind resistant features in reducing hurricane damage. ARA completed two studies in 2002 to quantify wind loss reduction for wind mitigation construction features. “Development of Loss Relativities for Wind Resistive Features of Residential Structures” focused on single-family homes (ARA, 2002a, see Appendix H-4). “Development of Loss Relativities for Wind Resistive Features for Residential Buildings with Five or More Units” addressed condominium and renter occupancies in buildings with five or more units.

The Florida Office of Insurance Regulation (OIR) issued Informational Memorandum OIR-03-001M on January 23, 2003 (see Appendix H-5). In essence the Memorandum requires property insurers in Florida to use the mitigation credit tables created by the OIR from the loss relativity tables in the 2002 ARA studies. The Memorandum also states that only premium credits should be offered, therefore all of the loss relativities were divided by the “worst risk” relativity. Thus, the results of implementation would be premium neutral or result in premium decreases, but there would be no premium increases.

The Memorandum goes on to state “Credits were then determined and tempered by 50%. This tempering was applied in view of the large rate changes which might otherwise be induced, the approximations needed to produce practical results (such as the specifications of the houses used for modeling and the number of rating factors used), and the potential for differences in results using different hurricane models.”

In 2005, the Florida Legislature (s. 22, ch.2005-111 Laws of Florida, see Appendix H-6) directed insurance companies to notify homeowners that these discounts were available. “Using a form prescribed by the Office of Insurance Regulation, the insurer shall clearly notify the applicant or policyholder of any personal lines residential insurance policy, at the time of the issuance of the policy and at each renewal, of the availability and the range of each premium discount, credit, other rate differential, or reduction in deductibles, and combinations of discounts, credits, rate differentials, or reduction in deductibles, for properties on which fixtures or construction techniques demonstrated to reduce the amount of loss in a windstorm can be or have been installed or implemented.”

Rule 69O-170.017 F.A.C. was amended effective December 16, 2006, requiring insurers to make new rate filings by March 1, 2007 to double the credits to 100% or provide actuarial justification for an alternative. Informational Memorandum OIR-07-03M (see Appendix H-7) issued 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.”

My Safe Florida Home

In the wake of devastating hurricanes during the 2004 and 2005 seasons, the State recognized that the continued availability of property insurance is critical to all aspects of the state’s economic stability and created the Task Force on Long-Term Solutions for Florida’s Hurricane Insurance Market (the Task Force) to identify solutions. In its final report to the Legislature (see

Appendix H-8), the Task Force made sweeping recommendations, including the establishment of a Mitigation Consumer Assistance Program to include (1) free consumer mitigation retrofit inspections by trained and qualified inspectors, (2) provision of retrofit grants for low-income families, and (3) provision of low- or no-interest loan programs for established, effective mitigation techniques.

The Florida Legislature in 2006 created the Florida Comprehensive Hurricane Damage Mitigation Program (see Appendix H-9) and appropriated \$250 million for the program. The program was directed to perform 400,000 windstorm inspections and provide at least 35,000 grants to assist homeowners in hardening their homes through the Department of Financial Services (DFS). DFS made a determination to conduct a pilot program to create, test and implement the above-described program that the Department named, “My Safe Florida Home.”

Program Goals

Program goals as specified by the Legislature were to:

1. Conduct free home-retrofit inspections to determine what mitigation measures are needed, what insurance premium discounts may be available, and what improvements to existing residential properties are needed to reduce the property’s vulnerability to hurricane damage.
2. Provide financial grants to encourage owners to retrofit their properties to make them less vulnerable to hurricane damage.
3. Develop a public outreach and advertising campaign to inform consumers of the availability and benefits of hurricane inspections and of the safety and financial benefits of residential hurricane damage mitigation.²

For the public outreach portion of the program, MSFH developed a Web site that contained information on the program and enabled homeowners to sign up for the free inspections. The program also issued press releases providing information on the program and provided the Web address so homeowners could apply. In addition, MSFH participated in hurricane fairs across the state where homeowners could get information and sign up for the free inspections. Finally, the program launched a \$1 million paid advertising campaign to inform people of the ease of signing up and provided the Web address. In addition, MSFH provided doors hangers and other informational materials to Wind Certification Entities (WCEs) for their inspectors to sign up homeowners for the free inspections provided by the MSFH program.

From the My Safe Florida Home 2007 Annual Report (see Appendix H-10) the MSFH program goals were to:

1. Help Floridians better protect their property and assets.
2. Help Floridians save money on their insurance premiums.
3. Promote public education and awareness of the financial and safety benefits of mitigation.

To meet these goals, the MSFH program developed the following objectives and strategies:

² Florida Chapter 215.5586 s. 2, ch 2006-12

GOAL: Help Floridians better protect their property and assets.

OBJECTIVE: To increase the strength of single-family, site-built homes to withstand hurricane damage and minimize losses.

STRATEGIES:

1. Provide up to 400,000 free hurricane mitigation inspections.
2. Provide at least 35,000 grants to help homeowners strengthen their homes.
3. Partner with local governments and non-profit organizations to leverage resources to harden low-income homes.

OUTCOME: Increase in the strength of Florida's homes as measured by the Home Structure Rating Scale.

GOAL: Help Floridians save money on their insurance premiums.

OBJECTIVE: Increase the number of homeowners obtaining savings on their hurricane insurance.

STRATEGIES:

1. Provide up to 400,000 free hurricane mitigation inspections.
2. Provide at least 35,000 grants to help homeowners strengthen their homes.
3. Facilitate homeowners' access to insurance discounts or credits for which they are eligible from their insurance companies.
4. Implement a statewide public education campaign.

OUTCOME: Increase in the amount of insurance premium dollars saved by homeowners following a state-sponsored hurricane mitigation inspection.

GOAL: Promote public education and awareness of the financial and safety benefits of mitigation.

OBJECTIVE: Increase the public's awareness of the financial and safety benefits of mitigation.

STRATEGIES:

1. Provide up to 400,000 free hurricane mitigation inspections.
2. Implement a statewide public education campaign.
3. Provide training and education to mitigation stakeholders, including but not limited to, inspectors, contractors, realtors and insurance agents.

OUTCOME: Increase in the number of homeowners seeking information (contacting MSFH online, by phone or attending events).³

Statutory Requirements

Florida Statutes directed the My Safe Florida Home program to provide up to 400,000 free hurricane mitigation inspections to homeowners residing in single-family, site-built homes statewide. The program was required to contract with a "Wind Certification Entity" that, at a minimum, must use inspectors who:

- Were certified as a building inspector under Section 468.607, Florida Statutes;
- Were a licensed general or residential contractor under Section 489.111, Florida Statutes;

³ 2008 MSFH Annual Report, February 1, 2009 (Page 7), see Appendix H-11.

- Were a licensed professional engineer under Section 467.015, Florida Statutes, and had passed the appropriate equivalency test of the Building Code Training Program as required by Section 553.841, Florida Statutes;
- Were a licensed professional architect under Section 481.213, Florida Statutes; or
- Had at least two years experience in residential construction or residential building inspections and have received specialized training in hurricane mitigation procedures.⁴

The MSFH program also was required to provide homeowners with a report that:

- Recommended up to seven improvements that could be made to better protect the home against hurricanes;
- Provided cost estimates to make recommended improvements;
- Outlined potential insurance discounts available based on the current structure of the home if improvements are made;
- Provided a hurricane-resistance rating of the home's current and prospective abilities with improvements.

Inspection reports contained recommendations that focused on protecting openings and strengthening roofs in the following categories:

- Roof deck attachment
- Secondary water barrier
- Code-plus roof covering
- Bracing gable end walls
- Strengthening roof-to-wall connections
- Protecting or replacing window openings
- Protecting or replacing doors⁵

Pilot Phase

The MSFH program began in August of 2006 when the Department of Financial Services contracted with the Federal Alliance for Safe Homes, Inc. (FLASH) to develop the program and perform a pilot inspection program. FLASH was to provide research, development, implementation and testing of program constructs to administer the wind inspections with all of the attendant information technology, research, training, and management support necessary. All elements of the program plan had to meet the statutorily-specified attributes.

The FLASH contract deliverables included:

1. Completion of 14,000 Inspections and 400 quality assurance inspections;
2. Research and development of proposed standards and procedures for WCEs;
3. Research, development, and implementation of a homeowner inspection report;
4. Research and development of a curriculum designed to qualify inspectors;
5. Teaching a minimum of ten (10) Blueprint for Safety™ (BFS) Retrofitting (DBPR Course 0005849) courses and three (3) Wind Mitigation Inspector Certification courses;

⁴ See the Technical Specifications section of this report for a discussion of how some of these requirements changed through time.

⁵ 2008 Annual Report, My Safe Florida Home, February 1, 2009 (Page 8).

6. Research and development of proposed standards and procedures for data processing;
7. Research and development of a proposed electronic data dispatch and collection system for use by WCEs.⁶

By February of 2007, FLASH had completed 14,116 inspections and 400 quality assurance inspections in 17 pilot counties. To accomplish this, FLASH (see the My Safe Florida Home Pilot Program Close-Out Report, Appendix H-12):

- Developed standards and procedures for WCEs;
- Developed and implemented a homeowner inspection report;
- Developed curriculum to qualify inspectors (trained 813 and of those 557 passed the subsequent exam – 69% passage rate);
- Developed standards and procedures for data processing; and
- Developed an electronic data dispatch and collection system to store the data and produce the homeowner inspection report.

The Launch

In early 2007, the Department of Financial Services took over the MSFH program from FLASH's pilot program. DFS selected 11 WCEs who in turn hired 500 inspectors to perform inspections.

On April 23, 2007, the My Safe Florida Home program re-opened and inspectors began inspecting the backlog of 53,000 inspection applications. By June, the backlog had been cleared and the program was receiving 2,200 applications per week.

On July 1, 2007, at the direction of the Florida Legislature, the Office of Insurance Regulation developed and implemented a standardized form for compiling the data and reporting features of the home to an insurance company. The development and approval of the Uniform Mitigation Verification Inspection Form OIR 1802 greatly aided in the standardization of discounts.

By January of 2008, the Department had completed 148,908 inspections and had eight WCEs performing inspections. In addition, the Department had approved 25,300 grant applications. The distribution of grant applications by source was as follows:

- 18,271 grants directly through the MSFH program administered by the Department of Financial Services;
- 2,307 grants through 17 local governments partnered with MSFH ; and
- 4,722 grants to low-income homeowners through the Volunteer Florida Foundation partnered with MSFH.⁷

⁶ My Safe Florida Home Pilot Program Close-Out Report, The Federal Alliance for Safe Homes, Inc. – FLASH, March, 2007.

⁷ MSFH Annual Report to the Florida Legislature, Feb. 1, 2008 (Pages 17 and 18)

Of those approximately 25,000 grant applications, 3,387 homeowners had been reimbursed for home hardening activities. Facts about the grant recipients as of Jan. 31st, 2008 included:

- Average grant reimbursement of \$3,360;
- Nearly 97 percent of homeowners reimbursed had used matching grants;
- More than 93 percent of grant program participants paid used grant monies to protect their home's openings - windows, doors and garage doors;
- Average insured value of grant recipients' homes is \$217,000;
- Average age of homes retrofitted to date is 29 years; and
- Local government partners in the MSFH program had completed 79 homes.

In early 2008, the Department issued a new Request For Proposal and selected nine WCEs to perform the remaining inspections. In addition, the Department replaced the data dispatch and collection system with the Wind Inspection and Grant Management System (WINGS), which allowed the Department to improve the quality of data received from inspectors in the field.

In March of 2008, the Department launched a state-wide media campaign for 11 weeks and on-line applications increased dramatically. During this campaign, \$645,137 was spent on television advertisements while \$346,427 was spent on radio advertisements. During the marketing campaign the MSFH program saw an 88 percent increase in online inspection applications. Prior to the campaign the program received an average of 17,000 online applications a month. Thirty days into the campaign the number of on-line applications increased to 32,000 a month. It should also be noted that many of the WCEs also launched aggressive campaigns to sign up homeowners for the program.

Kerr & Downs Research was hired to study of the effectiveness of the media campaign. It was a classic pre-test/post-test study in which a statewide survey of homeowners was conducted prior to the media campaign (October 2007) and an identical study was conducted at the conclusion of the media campaign (May 2008). The research study (see Appendix H-13) was designed to measure the effectiveness of the media campaign for generating awareness of the My Safe Florida Home Program and getting homeowners to sign up for free wind inspections.

Highlights of the Kerr & Downs Research were:⁸

- Prior to the media campaign, homeowners were willing to spend \$3,191 to harden their homes, while they were willing to spend \$4,448 to strengthen their homes after the media campaign.
- The media campaign had salutary effects on the impact of various arguments for signing up for free wind inspections. The media campaign increased the percentage of homeowners who indicated a likelihood of signing up for a free windstorm mitigation inspection.
- Awareness of the concept that there is a program to help homeowners and the percentage of homeowners who were able to give the correct name of the program without prompting remained substantially the same before and after the media campaign.

⁸ Kerr & Downs Research, MSFH Pre and Post Public Education Evaluation

- Knowledge of some program elements increased during the media campaign, while knowledge of other elements decreased.

By July of 2008, the MSFH program had received more than 400,000 applications for a free inspection and stopped accepting inspection applications. However, grant application fulfillment continued until June 30, 2009. The MSFH program, including local government and non-profits, had approved approximately 39,000 homeowners for mitigation grants and had paid 18,787 grants totaling more than \$63.8 million.

By January of 2009, 391,216 homes were inspected under the MSFH program. In January 2009, MSFH had not exceeded the goal of 400,000 inspections as some homeowners who had applied for the inspection had not completed the inspection in a timely manner. MSFH released another 15,000 applications to WCEs which were completely by June 30, 2009.

Due to Legislative funding being eliminated, the My Safe Florida Home program concluded on June 30, 2009. Below are the totals for inspections and grants.

Inspections

Inspections completed	401,372
Total funds spent on Inspections	\$58,470,600

Grants

Department of Financial Services

Total number of reimbursements	24,486
Total amount of grant reimbursement	\$82,650,215

Direct Pay Project (Low-Income)

Total number of homes served	525
Total amount of grants paid	\$2,182,958

Non Profit Partnerships

Total number of homes served	6,203
Total amount of grants paid	\$18,016,680

Local Government Partnerships

Total number of homes served	2,333
Total amount of grants paid	\$8,438,311

Total Homes Retrofitted	33,547
Total Grants Funds Awarded	\$111,288,164
Average grant awarded	\$3,317.38

Table 2: Mitigation Discounts and MSFH Program Timeline

Date	Action	Commentary
1993	Florida Legislature enacts 627.0629	Rate filings must recognize windstorm mitigation features on property.
1997	DOI rule 69O-170.017 F.A.C.	Discounts for mitigation features must at least equal ISO discounts.
2000	Florida Statute 627.0629 amended	Rate filings must include “actuarially reasonable” discounts
2002	Two ARA studies on loss relativities	One study for residential structures focusing on single family homes and another for residential buildings with five or more units.
Jan. 2003	OIR issues Informational Memorandum OIR-03-001M	Insurers are to only offer premium discounts tempered at 50% of ARA loss relativities.
2005	Florida Legislature enacts s.22 ch. 2005-111 Laws of Florida	Requires insurers to notify homeowners of discounts that are available.
March 2006	Task Force on Long-Term Solutions for Florida’s Hurricane Insurance Market Report	Recommends creation of what would become My Safe Florida Homes
May 2006	Bill creating program approved by Legislature and signed by governor	
Aug. 2006- Nov. 2006	Pilot program begins Aug. 15	Background checks, drug screening conducted on wind inspector candidates. Training materials developed. For wind inspectors: Six training classes held; trained 500 inspectors to conduct mitigation inspections. For contractors: 12 training classes for approx. 800 contractors who would perform mitigation work; reviewed contractor applicants for workers’ comp coverage and licensure. Solicited partners through Volunteer Florida Foundation: Secured 12 nonprofits in 10 counties to provide inspections and mitigation assistance. Hosted <i>Fortify Florida</i> expos in Tampa Bay, Pensacola and Palm Beach. Conducted 14,264 free inspections in 17 counties.
Dec. 2006	OIR amends rule 69O-170.017 F.A.C.	Requires all rate filings to offer discounts at 100% of ARA loss relativities
Feb. 2007	Legislature makes statutory changes to MSFH	Required to improve and realign processes and service delivery for inspection and grants.
April 2007	The launch of MSFH	11 WCEs in place; 500 approved inspectors begin working 53,000 customer backlog
June 2007	Customer backlog cleared	New applications total 2,200 weekly
Jan. 2008	MSFH moving forward	148,908 inspections completed;
March 2008	State-wide media campaign	Approximately \$1 million was spent on television and radio.
May 31, 2008	Grant goal met	Applications for matching grants total 35,000, which was the legislative goal. No new grant applications accepted.
July 2008	Inspection application goal met	400,000 applications for free inspections had been received. Grant application fulfillment continues.
Jan 2009	MSFH had completed 391,000 free inspections.	State release an incremental 15,000 inspections to fill the void for homeowners who did not complete a state sponsored mitigation inspection
June 2009	Absent funding from the Legislature the MSFH ended on June 30	401,372 homes inspected 33,547 grants awarded Total of grants awarded \$111 million Average grant awarded \$3,317

MSFH Focal Points

The Inspectors

After a market capacity analysis, DFS determined that the existing, diverse home inspector marketplace was inadequate to allow for private sector implementation of the MSFH program without first creating a uniform plan. DFS believed that creating a standardized implementation plan would help ensure the safety of Floridians and their homes as well as ensure program success. The basis for this conclusion included findings that the home inspection profession in Florida is unregulated, unlicensed and includes widely diverse levels of skill, expertise and professionalism. In addition, prior to MSFH no significant supply of specialty wind mitigation

inspectors existed with the requisite training, criminal background screening, drug testing and experience required by F.S. 215.5586

Florida Statutes directed the MSFH program to contract with a “wind certification entity” required to use inspectors who:

- Are certified building inspectors, licensed general or residential contractors, licensed professional engineers, licensed professional architects or have at least two years experience in residential construction or residential building inspections;
- Undergo background checks, including fingerprinting and drug testing; and
- Receive specialized training in hurricane mitigation procedures.

WCEs were also required to have an internal quality assurance program that included a re-inspection component.

To be approved as an inspector for the MSFH program, individuals had to:

Step 1: Pass the inspector course with a score of 90 percent or better.

Step 2: Undergo a level two background check as well as a five-panel drug screening.

In addition to these requirements, WCEs were required to have additional information on each inspector on file. These items included:

- Criminal history affidavit;
- Drug test negative results;
- MSFH Certification;
- MSFH Re-Certification (after additional training) ;
- Experience affidavit stating each inspector had a minimum of two years of experience;
- Non-Solicitation agreement stating the inspectors would not solicit homeowners for other business;
- Acceptable auto insurance documents;
- Acceptable liability insurance documents;
- Current driver’s license; and
- Acceptable employment agreement.

The MSFH program had facilitated training and background checks for 1,596 individuals interested in performing mitigation inspections. As of January 30, 2009, 336 inspectors were actively performing inspections for the MSFH program.

During the pilot phase, the MSFH program contracted with the Federal Alliance for Safe Homes (FLASH) to develop the training manual for inspectors and to conduct training classes.

Beginning in March 2007, the University of Florida (UF) through its extension service offices statewide, began offering training classes for inspectors. As of January 30, 2009, UF had held 57 training classes.

In total, some 3,223 inspectors took the exam and 2,107 passed the test for a pass rate of 65%. In the fall of 2008 the MSFH program offered re-certification training and an exam. Some 674 inspectors took this training and 534 passed for a 79% pass rate.

Although Florida Statutes only require WCEs contracted with the MSFH program to have a quality assurance program, in 2007 the MSFH program initiated performance and compliance audits of WCEs. The first was completed on October 2007⁹ (see Appendix H-14) and the second was completed in June of 2009¹⁰ (See Appendix H-15).

The Data

The WINGS database is a relational database consisting of 129 tables. It contains data from 444,805 home inspections that were performed between June 2005 and June 2009. The database was pre-populated with data from the data dispatch and collection system. The rest of the data was entered by the inspecting WCEs through the WINGS transactional processing system from the *MSFH Survey Checklist* forms used by the WCE inspectors. In addition to property identifiers, mitigation features such as roof covering, roof-to-wall connections, opening protections, and other relevant information from the inspections was stored.

The Reports to Homeowners

On average, homeowners who participated in the program received an inspection report within 30 days (see Appendix H-16 for a sample report). The report provided the homeowner with a hurricane resistance rating (based on the Home Structure Rating Scale) designed to provide a general indication of how well the home was expected to perform in the event of a hurricane. The report indicated the beneficial features of the home that contributed to the rating and improvement plans to increase its rating. Improvement plans provided the homeowner with the new hurricane wind resistance rating the home would receive if specific improvements were completed, the estimated cost of the plan and the estimated annual wind insurance savings. The report also included contractor bid sheets to assist the homeowner in collecting estimates for the recommended improvements.

The Grants

By the conclusion of the program, 33,547 homes had been retrofitted at a cost of \$111.2 million. The average grant award was \$3,317. DFS reimbursed 24,486 in grants to homeowners while 525 were direct pay grants issued to low income homeowners. Some 6,203 grants were issued through non profit partnerships and local government partnerships issued 2,333 grants.

No-Interest Loans

⁹ Quality Assurance Report: Wind Certification Entities Performing Inspection Services for the My Safe Florida Home Program (October 29, 2007)

¹⁰ Quality Assurance Report: Wind Certification Entities Performing Inspection Services for the My Safe Florida Home Program (June 25, 2009)

In July of 2008, the Department issued a Request for Proposal (RFP) to lending institutions to provide a no-interest loan program to residents who desired to harden their homes. The program was to offer loans of up to \$5,000 for a period of three years with the MSFH program paying the interest on the loans. The goal was to assist homeowners in making improvements to their homes and the Legislature appropriated \$10 million for the program. However, the Department did not receive a single response to the RFP and canceled the program.

Wind Inspections Outside of MSFH

While companies began performing mitigation inspections in the 1990s, there was no governing body overseeing wind inspections in the private market. Because of this, it is difficult to ascertain the breadth and/or depth of the private windstorm inspection market. Growth factors for the market include the requirement that insurance companies need to notify homeowners of the discounts, the popularity of the MSFH program, and the variety of professions that are allowed to sign the 1802 form. This gives rise to the same situation that existed before MSFH “the home inspection profession in Florida is unregulated, unlicensed and includes widely diverse levels of skill, expertise and professionalism.”

Private inspection companies – especially in South Florida where windstorm premiums are traditionally higher due to the exposure – began performing windstorm inspections in the late 1990s. These inspections were to verify the mitigation features of residences to enable homeowners to receive the mitigation credits on the windstorm portion of their homeowners’ insurance premiums. These inspections were being completed for inspection fees of approximately \$150. These inspections became increasingly popular because most homeowners were receiving premium mitigation discounts greater than the \$150 fee for the inspection.

In 2005, after the Legislature directed insurance companies to notify homeowners of the mitigation discounts, inspections increased. After the conclusion of the MSFH program, there was a surge in private market inspections because many people had become aware of the discounts available.

Once the funds for the free inspections had been exhausted, private inspection firms became more aggressive in their marketing of the private inspections. Competition entered the marketplace and inspections which traditionally carried a \$150 price tag, were selling for as little as \$45 in the Panhandle.

Currently, no official list documents the total number of unregulated private inspection firms doing business in the state. Thus the exact number of such companies is unknown (see Appendix H-17 for a list of more than 400 known companies).

Technical Specifications

Following the scope of work and technical specifications outlined in attachment C of the Request for Proposals (DFS CS RFP 09/10-10), the following section is divided into eight parts. The information presented comes from a variety of sources, including MSFH resources, reinspection data, and surveys conducted from December 2009 – February 2010. The surveys were conducted to obtain information about windstorm inspections and inspectors, including but not limited to: inspector minimum qualifications and training; inspector policies and procedures; non-MSFH inspection pricing; satisfaction with inspectors' professionalism and training; satisfaction with the quality and accuracy of submitted OIR 1802 forms; and concerns about the results produced from the MSFH program and OIR 1802 forms. These four surveys solicited the opinions and perspectives of the following stakeholders: Florida windstorm inspectors (both WCEs and private market inspectors separately); homeowner insurance agents in Florida; and property insurance companies selling homeowners insurance in Florida. The four surveys and their complete results are contained in Appendices TS-1 thru TS-4.¹¹ Care must be taken when interpreting the results of these surveys. Many of those surveyed did not complete all questions in the survey; a bias in the survey results may exist. For example, private market inspection firms that are more stringent in their management efforts may have been more likely to respond to this survey.

The screening, certification, qualification and training processes (technical specifications 1-4) utilized by both the WCEs and private market windstorm inspection firms are designed to ensure a minimum level of competency and professionalism among the inspectors. The purpose of comparing WCEs and private market windstorm inspection firms in accordance with these four criteria is to determine the optimal structure of a windstorm inspection system that ensures competency and professionalism with the minimum amount of cost and monitoring.

It is important to note, however, that these four criteria, and the resulting recommendations, are highly related to one another. Separation of the effects of one requirement from the others is difficult at best. Furthermore, some may serve as a replacement for others. For example, a more stringent certification process could be used in place of higher minimum qualifications. While the surveys and analysis were designed to determine the impact of each of these processes individually, the processes are all in place at the same time. In a laboratory setting, a researcher would be able to isolate the effects more easily than is possible here, so care must be taken when interpreting the technical results. In an effort to create an optimal windstorm inspection system, it is vital to look at specific recommendations in light of one another as well as the long-term goals for the system.

The collection of data, fraud prevention, and quality assurance policies and procedures (technical specifications 5-7) are designed to ensure that both the inspectors and the entities for which they work achieve a minimum level of competency, performance, and security of personal

¹¹ Response rates for the surveys were reasonably high as compared with historic survey response rates. A range of 5-20% response is considered typical by most survey experts. All four surveys fell within the high end of this range or well above this range. For example, seven WCE responded to the survey, although a small raw number, they represent 70% of the WCEs surveyed.

information. The information on the activities of private windstorm inspection firms in these areas was gathered from a survey of those firms.

The final technical specification focuses on problems that may exist in the post-MSFH inspection regime. Reinspection information is utilized to show the differences in error rates found by private insurers and Citizens in their early reinspection programs relative to the error rates found in MSFH. The moral hazard incentives present in the current system appear to outweigh any punitive measures in place.

Technical Specification 1

Examine the screening process of inspectors associated with the My Safe Florida Home program and compare with the screening process used by private market inspection firms. Compare and develop minimum screening standards.

The My Safe Florida Home (MSFH) screening process for inspectors

To be eligible for employment as an inspector for one of the WCEs, applicants had to go through a screening process. The screening process for MSFH inspectors consisted of the following items:

1. Each applicant was required to submit to a Florida Department of Law Enforcement (FDLE) criminal (fingerprint) history level two background check conducted by the state.
2. Each applicant was required to submit and pass a 5-panel drug screen testing for known recreational drugs. The results were reported to the WCE. The 5-panel screen included:
 - a. Amphetamines
 - b. Cocaine Metabolites
 - c. Marijuana Metabolites
 - d. Opiates
 - e. Phencyclidine

Once the applicant had passed the above noted one time screens and had the MSFH certification (discussed below), the applicant must have provided the WCE with the following documentation required by MSFH:

3. Non-Solicitation Agreement stating the inspectors would not solicit homeowners for other business
4. Auto Insurance documents meeting minimum requirements
5. Liability Insurance documents meeting minimum requirements
6. Proof of Workers' Compensation Insurance or an approved exemption
7. Current, valid Driver's License
8. WCE Employment Agreement
9. Signed acknowledgement of WCE Drug and Alcohol Free Workplace policy
10. Signed WCE Code of Ethics policy

11. Signed Appearance and Dress Code policy
12. Approved inspector equipment checklist

Once hired, the inspector was required to update his/her license and insurance information at each renewal. None of the other documents were required to be updated.

There were no significant changes to this minimum screening process during the life of the MSFH program.

Private market inspector screening process

The information regarding the screening processes utilized by private market inspectors was gathered via the inspector survey. Details on the methodology and questions used in this survey are in Appendix TS-2. The private market inspection firms operating today can be divided into two categories: WCEs conducting private market inspections (WCEs) and private market inspectors who never participated in the MSFH program (private market inspectors).

Based on results of the survey sent to inspectors, the most common general screening processes utilized among private market inspectors are:

Continuing education required:	97% (74/76 private market inspector respondents as compared with 4/7 among WCE respondents)
Auto liability insurance:	96% (74/77 private market inspector respondents as compared with 3/7 among WCE respondents)
General liability insurance:	95% (74/78 private market inspector respondents as compared with 4/7 among WCE respondents)
Background check:	73% (53/73 private market inspector respondents as compared with 4/7 among WCE respondents)
Drug testing:	66% (47/71 private market inspector respondents as compared with 4/7 among WCE respondents)

Comparison of MSFH and private market screening processes

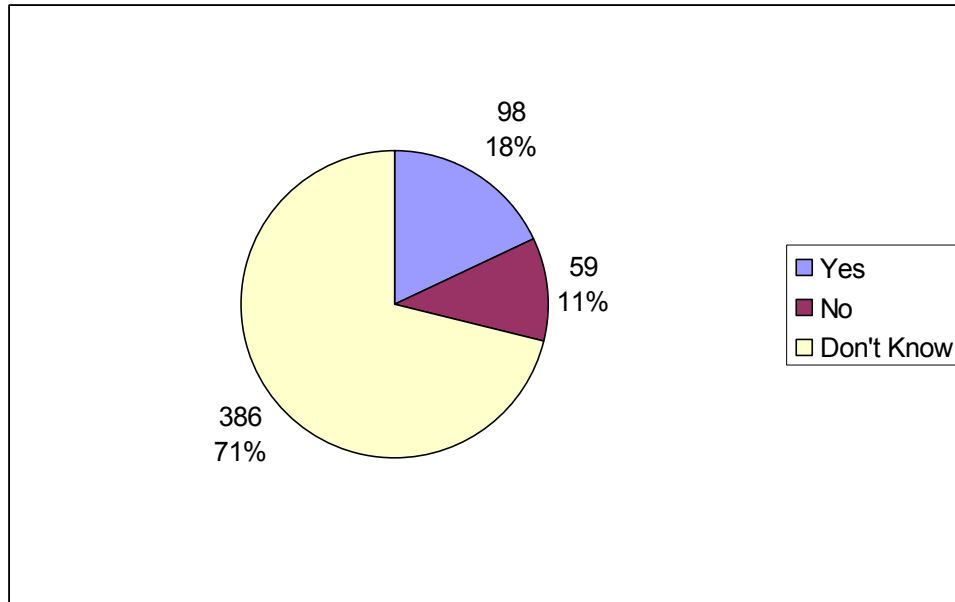
A substantial number of WCEs have altered their screening processes for inspectors conducting inspections outside of the MSFH program, according to survey results. Meanwhile, as noted above, many of the private market inspectors have adopted the general screening processes as those required by MSFH.

57.1% (4/7) of WCE respondents report using each – drug testing, background checks, continuing education and general liability insurance for screening, and 42.9% (3/7) of WCE respondents report using auto liability insurance for screening.

Interestingly, surveyed agents predominantly do not know whether the private market inspectors with whom they do business utilize the same screening requirements as were used within the MSFH program. Chart 1 illustrates the lack of agent knowledge of inspector screening processes,

given that a substantial majority responded that they “don’t know” whether private market inspectors have the same screening policies as required within the MSFH program.

Chart 1: Insurance Agents Knowledge of Inspectors Screening Process



Minimum Screening Standard Recommendations

The screening process needs to remain an integral part of the inspection process in conjunction with certification, training and continuing education. To maintain the safety and security of property owners who allow inspectors onto the property and minimize the state’s liability for any inappropriate inspector behavior, any inspector oversight organization should enhance the above listed MSFH screening processes with:

- Random drug testing of inspectors;
- Employer notification of criminal convictions; and
- Annual updating of all of the records in the inspector files.

Technical Specification 2

Examine the certification process of inspectors associated with the My Safe Florida Home program and the certification process used by private market inspection firms. Establish an argument for or against the licensure of hurricane mitigation inspectors.

The My Safe Florida Home (MSFH) certification process for inspectors

The certification process for MSFH inspectors consisted of passing the inspector course with a score of 90 percent or better. Applicants were required to take the My Safe Florida Home Wind and Hurricane Mitigation Inspector Training offered by UF. This was an eight hour course

followed by a written exam. Applicants were required to pass the exam at a minimum of a 90 percentile level.¹² While modifications were made to the course and exam material over time, the certification process did not change throughout the life of the MSFH program.

Private market certification process

There is no certification process for inspectors conducting private market inspections. However, there are minimum qualification standards for those professions legally able to sign the OIR 1802 forms. Those qualification standards are discussed in Technical Specification 3.

Responses from the inspector survey indicated that 61.36% of responding private market inspection firms report that some inspectors within their firm received training through the MSFH program. Furthermore, some of the private market inspections are being completed by inspection firms that were WCEs in the MSFH program. Therefore, while no certification is required in the private market, many inspections are being completed by inspectors who are certified as MSFH inspectors.

The Need for Certification & Recommendations

To ensure consistent knowledge and ability to conduct an accurate windstorm inspection, certification requirements, in conjunction with screening, minimum qualifications, and continuing education requirements are necessary. As long as the licensure or certification process is rigorous, then the process should raise the level of competency and professionalism among the inspectors. A stringent certification process can replace some of the minimum qualification requirements. For example, individuals do not need to be engineers or architects to know the proper way to examine the nailing pattern, which can be taught during certification. Conversely, some engineers or architects may not know how to properly examine a property for the nailing pattern. In addition to requiring certification, the following recommendations regarding certification are also included:

- Inspections should be completed by certified inspectors only. To ensure consistent knowledge and ability to conduct an accurate windstorm inspection, certification requirements, in conjunction with screening, minimum qualifications, and continuing education requirements are necessary.
- Individuals can become certified inspectors through:
 - Stand-alone Certification – any individual may take the full certification course and be awarded certification when they pass the final examination with a qualifying score.
 - Professional Licensure and Certification – any individual holding one of the following professional licenses will be awarded certification by taking the shorter certification course and passing the final examination with a qualifying score:
 - Architect
 - Engineer

¹² In total, some 3,223 inspectors took the exam and 2,107 passed the test for a pass rate of 65%.

- Building inspector
- General contractor
- Home inspector¹³

Technical Specification 3

Examine the inspector qualifications between those who performed inspections with the My Safe Florida Home program and those used by private market home inspection firms. Compare and develop minimum qualification standards.

Minimum qualification standards of MSFH inspectors

Initially, there were no other minimum qualification standards for MSFH inspectors (other than the initial screening process and certification requirements). Minimum qualification changes were made during the MSFH program. As of November 1, 2007, the MSFH program added a minimum experience qualification to the program. Inspectors were required to have a minimum of two years of residential construction experience or two years of residential inspection experience if they were not one of the following:

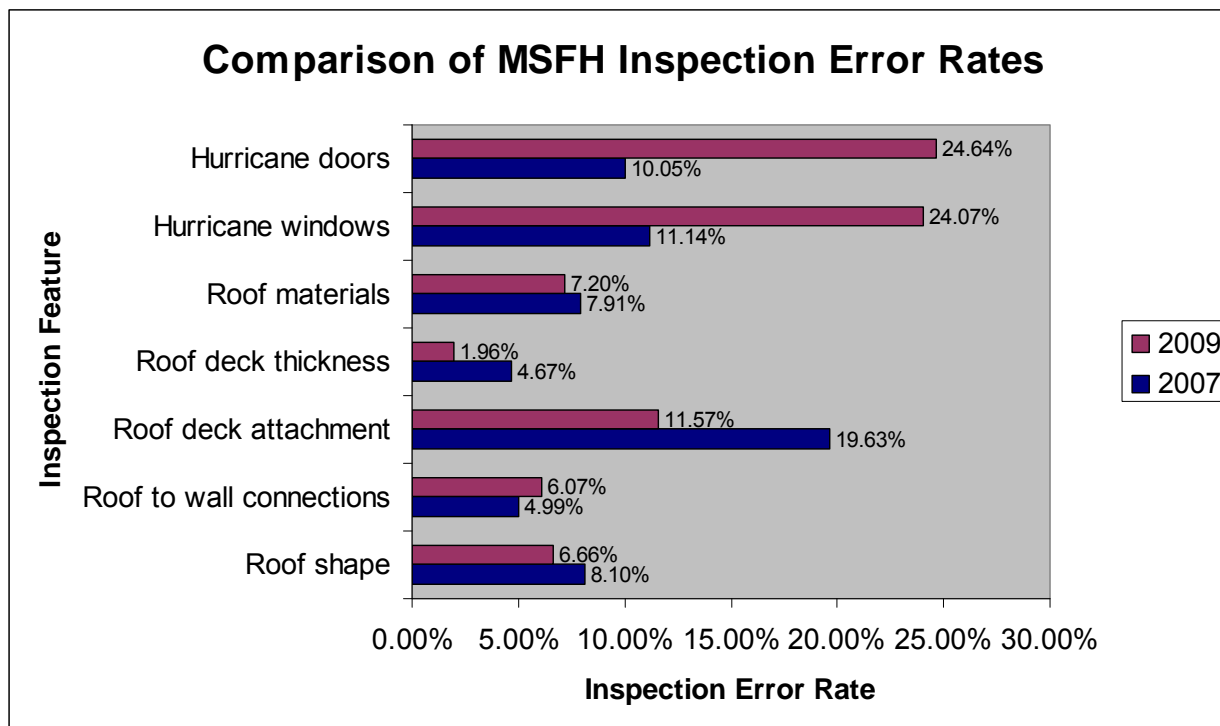
- certified building inspector
- licensed general or residential contractor
- licensed professional engineer
- licensed professional architect

Inspectors having more knowledge of residential construction techniques should be able to conduct a more thorough and higher-quality inspection than those with less knowledge. Thus, this change in qualifications standards would hopefully result in greater inspection quality (e.g., lower error rates upon reinspection). The MSFH program conducted formal quality assurance studies in both 2007 and 2009 to evaluate how accurately inspections were being conducted within the program.¹⁴ Some of the errors found were immaterial with respect to determination of the mitigation credits to be awarded. If limited to material errors and categorized by major home feature, the data used for the MSFH quality assurance studies reveal some interesting information. Chart 2 below depicts error rates in reporting mitigation features, based on samples of 2,567 and 4,943 inspections from the MSFH 2007 and 2009 Quality Assurance Report data, respectively.

¹³ Home inspectors are subject to licensure beginning in July 2010. The inclusion of home inspectors on this list is subject to that licensure taking effect.

¹⁴ Quality Assurance Report: Wind Certification Entities Performing Inspection Services for the My Safe Florida Home Program (October 29, 2007 and June 25, 2009), located in Appendices H14 & H15, respectively.

Chart 2: Comparison of MSFH Error Rates: 2007 vs. 2009



Comparing 2007 and 2009 error rates, the quality of inspections with respect to the roof deck attachment appeared to have gained the most improvement, with a change in error rate from 19.63% in 2007 to 11.57% in 2009. Disconcertingly, the inspections of openings (i.e., hurricane-rated windows and doors) appeared to have “lost” quality, with error rates more than doubling in 2009 compared to what they were in 2007.¹⁵ Based on these results, there is not enough evidence to determine that the higher minimum standard made a difference in the overall quality of inspections. These findings do provide information that may help in the design of future continuing education programs.

Minimum qualification standards of private market inspectors

There are no minimum qualification standards for private market inspectors. However, there are minimum professional requirements for individuals allowed to sign OIR 1802 forms. The signatures are governed by Florida Statutes, Chapter 627.711. The OIR 1802 form can be signed by any of the following: certified building code inspector; licensed general, building, or residential contractor; licensed professional engineer; licensed architect, any other individual or entity recognized by the insurer as possessing the necessary qualifications. Each of these professions has their own minimum qualification standards as noted below.

¹⁵ The differences in error rates based on inspections of roof deck attachments and openings are each statistically significant at the .01 level of significance. Differences in error rates with respect to roof deck thickness, roof-to-wall connections and roof shape are each statistically significant at the .05 level of significance.

Building Code Inspector

Certified building code inspectors are governed by Florida Statutes, Chapter 468. Certification may occur by the following methods:

Certification by Examination:

1. Requirements:
 1. 5 years combined experience in construction or related field, building code inspection, or plans review
 2. Combination of postsecondary education and experience which totals 4 years, with at least one year of experience
 3. Holds a standard certificate and completes training program (>200 hours) in certification category sought
 4. Completes training program (>300 hours) and has a minimum of two years experience in building code inspections, plan review or fire code inspections
2. Examination Requirements:
 1. State certification examination
 2. Board may accept proof of passing a similar exam

Certification by other methods:

3. Board may accept proof of passing a similar exam
 - Certification by endorsement – may accept other training or certification

Certified building code inspectors are required to have 14 hours of continuing education every two years.

Contractor

Contractors are governed by Florida Statutes, Chapter 489. Certified construction contractors can be licensed by the following methods:

Licensure by Examination:

4. Education Requirements:
 1. Undergrad degree from 4-year college in engineering, architecture, or building construction
5. Experience Requirements:
 1. Has completed one year of experience in field with education requirements above
 2. 4 years active experience as apprentice (including one year as a foreman) in field
 3. One year as a foreman and combined 3 years of experience and college education
6. Examination Requirements:
 1. State certification examination

Licensure by other methods:

- Is qualified for certification, and has passed a similar exam in another jurisdiction
- Holds valid license in another jurisdiction as long as requirements were similar to Florida
- Holds a valid license in another jurisdiction that has a reciprocal arrangement with Florida

Certified construction contractors are required to have 14 hours of continuing education every two years and pass a criminal background check.

Engineer

Engineers are governed by Florida Statute, Chapter 471. Engineers can be licensed by the following methods:

Licensure by Examination:

7. Education Requirements:
 1. Four years of educational qualifications -- EAC/ABET Engineering Degree, graduate degrees (Masters or PhD in Engineering can count as one year of experience)
8. Experience Requirements:
 1. 48 months of engineering experience at the time you submit the Professional Engineers Exam Application
 2. Or 10 years of experience without the educational requirements
9. Examination Requirements:
 1. Fundamentals Engineering Examination (NCEES Fundamentals Examination)
 2. Must obtain a score of 48/53 on Laws and Rules Study Guide Questionnaire (Principles and Practices Exam)

Licensure by other methods:

- Holds valid license in another state that has similar requirements to Florida
- Passed an exam that is similar to the Fundamentals Exam and:
 - Held valid license in another state for 15 years with 20 years experience
 - Has a doctorate in engineering from an institution accredited by the Accreditation Board for Engineering Technology
 - Has a doctorate in engineering and has taught engineering for at least three years

Engineers are required to have four professional development hours for each year of the renewal period (e.g. 2 year renewal = 8 professional development hours)

Architect

Architects are governed by Florida Statute, Chapter 481. Architects can be licensed by the following methods:

Licensure by Examination:

10. Education Requirements:

1. Graduate of an accredited school or college of architecture (National Architectural Accreditation Board)
2. Graduate of an approved architectural curriculum from an unaccredited school

11. Experience Requirements:

1. Has completed one year of internship requirement

12. Examination Requirements:

1. Architecture licensure examination

Licensure by other methods:

- Is qualified to take the exam in Florida, and has passed a similar exam in another jurisdiction
- Holds valid license in another jurisdiction as long as requirements were similar to Florida
- Holds valid certificate issued by National Council of Architectural Registration Boards and holds valid license to practice architecture issued by another state or jurisdiction

Architects are required to have 20 hours of continuing education every two years.

Comparison of MSFH and private market minimum qualifications

It is difficult to compare the minimum qualifications of MSFH inspectors with the private market inspectors because the private market inspectors have no minimum qualifications. The signers of the OIR 1802 have minimum qualification standards that vary by their profession; there is no guarantee, however, that the signers of the OIR 1802 form are the individual inspector who actually completed the inspection.

In addition to the required screening and certification processes, the minimum experience qualification aids in ensuring a higher level of knowledge and professionalism among the MSFH inspectors. While inspectors in the private market may meet or exceed these levels, there are no mechanisms in place to ensure minimum qualification standards.

It is important to note that a large number of the private market inspectors responding to the survey offered open-ended comments expressing concern about the minimum qualifications required of inspectors. Their concerns were aimed at WCEs as well as private market inspectors. Those inspectors who expressed such concerns, for the most part, expressed the opinion that the minimum qualifications **standard has been set too low**, both within and outside the MSFH program. Following is a representative sample of excerpts from individual inspector comments:

#1. "I believe only licensed contractors, architects, and engineers should be able to do the inspections..."

#2. "I agree with the parameters of the state law that professional architects, engineers, building contractors, and code inspector do these inspections..."

#3. “Contractors, engineers, and architects do not necessarily have field experience that qualifies them for this inspection. Many contractors I have spoken with do not know what qualifies some of the 8 items on the form (i.e FBC vs Non FBC, Braced vs Not Braced, etc). Formal training, a test, certification, and oversight are needed to ensure accuracy and accountability.”

#4. “I am a licensed architect and the only wind mitigation inspector in our firm. I attended the MSFH [class] for the knowledge and continuing education. I think it is ludicrous that an individual with no design / construction experience could sit in an 8 hour class, take a test, and be certified to perform inspections.”

#5. “You should have to be a CGC - general contractor to be able to perform the inspections. The contractor MUST be the person on site doing the inspections, not just sitting in an office signing papers... The person signing the form must be the one that does the inspection. The best way to make sure it is done correctly is to have only contractors do it.”

Minimum Qualification Recommendations

- The signer of the OIR 1802 form must be the inspector who completed the inspection.
- Add home inspectors to the list of professional license holders who would qualify for the shortened certification course. As noted in technical specification 2, individuals can become certified inspectors through:
 - Stand-alone Certification – any individual may take the full certification course and be awarded certification when they pass the final examination with a qualifying score.
 - Professional Licensure and Certification – any individual holding one of the following professional licenses will be awarded certification by taking the shorter certification course and passing the final examination with a qualifying score:
 - Architect
 - Engineer
 - Building inspector
 - General contractor
 - Home inspector

Technical Specification 4

Examine the training and continuing education courses provided to inspectors who performed inspections with the My Safe Florida Home program and the training and continuing education requirements of private market inspection firms. Compare and develop minimum training and continuing education standards.

Training and continuing education requirements of the MSFH inspectors

Initially, the only training requirement of the MSFH program was the eight-hour Wind and Hurricane Mitigation Inspector Training offered by the University of Florida. At the conclusion of the training, perspective inspectors were required to take a test and pass at the 90 percentile

level. After this initial training, there were no continuing education requirements to maintain MSFH certification.

Beginning in November 2007 and continuing through February 2008, the MSFH program began issuing a series of Technical Bulletins (see appendix TS-5) with information on how inspectors should rate certain conditions. Each inspector was required to submit a document confirming that they had read and understood the material. The Technical Bulletins issued between November 2007 and February 2008 addressed issues that inspectors were encountering in the field. These issues included:

- Volume I, Issue # 1 November 6, 2007 – reviewed the findings of the MSFH’s Quality Assurance Review and outlined modifications to data gathering procedures.
- Volume I, Issue # 2 (Revised) December 12, 2007 Classifying Roof Shape on MSFH Checklist
- Volume I, Issue # 3, December 14, 2007 Wind Rated and Impact Rated Garage Doors
- Volume II, Issue # 1 January 4, 2008 Topic: Overlapping Gables
- Volume II, Issue # 2 January 11, 2008 Inspection Photographs
- Volume II, Issue # 3 January 16, 2008 H – Rated Protection on Gable End Wall Vents
- Volume II, Issue # 4 January 21, 2008 Roof Covering – Year Installed.
- Volume II, Issue # 5 February 20, 2008 Secondary Water Restraint, the MSFH Program and the 2001 Florida Building Code

In the fall of 2008, the MSFH program required additional training and re-certification. Each certified inspector was required to take the 8-hour Wind and Hurricane Mitigation Inspector Training Program Update. Again, inspectors were required to pass with a minimum of a 90 percentile on the exam.¹⁶

Minimum training and continuing education requirements of private market inspectors

One set of perspectives on minimum training and continuing education requirements comes from inspectors themselves. Based on inspector response to this set of questions, 65.22% (45 out of 69 respondents) of private market inspectors report having formal training outside the MSFH program while 100% (4 out of 4 respondents) of WCEs report having formal training outside the MSFH program. 78.26% (54 out of 69 respondents) of private market inspectors and 50% (2 out of 4 respondents) of WCEs report the opinion that formal training should be required for all windstorm inspectors.

Another perspective on professionalism and training comes from homeowner insurance agents. 476 agents answered both survey questions related to satisfaction with the professionalism and training of inspectors; these questions were identical except that they separated the satisfaction rating for MSFH and private market inspectors. On average, agents were slightly less than satisfied with MSFH professionalism and training (2.09 on ordinal scale of 1-4, where 1=extremely satisfied and 4=not satisfied). On average, agents were slightly more than satisfied with private market inspector professionalism and training (1.90 on ordinal scale of 1-4, where

¹⁶ Some 674 inspectors attended this training and 534 passed the exam for a 79% pass rate.

1=extremely satisfied and 4=not satisfied). The practical significance of this difference in satisfaction may seem small; the statistical significance is strong.¹⁷

The final perspective on professionalism and training comes from insurance company executives. These respondents were also asked about their satisfaction with MSFH professionalism and training. Nine of the top 20 homeowners insurers in Florida responded, reporting, on average, a satisfaction level somewhere between satisfied and less than satisfied, with a mean of 2.5 on an ordinal scale of 1-4, where 1=extremely satisfied and 4=not satisfied). Based on this average value of 2.5, the company respondents report being less than satisfied with MSFH professionalism and training than the agents.

Comparison of MSFH and private market minimum training and continuing education requirements

The training and recertification was designed to increase inspector knowledge of the MSFH processes. There was no specific reinspection program after the Technical Bulletins were issued or after the September /October 2008 re-training to determine the impact on inspection accuracy. The two quality assurance reports issued by MSFH (see Chart 2 above) indicated that some aspects of inspection accuracy improved while others did not. While the private market inspectors are not subject to minimum training and continuing education requirements, the survey respondents indicate that there appears to be significant training occurring outside of the MSFH training program.

Minimum Training and Continuing Education Requirements Recommendations

- The extent of training required for certified inspectors should depend on background, with a more thorough training course for those individuals who do not hold professional licensure and a shorter course for those individuals holding professional licensure in one of the fields listed above.
- Training courses need to be offered frequently enough to ensure a minimum backlog of applicants.
- Consideration should be given to offering classroom and hands-on training as well as a written and field-based examination for certification.
- Continuing education (CE) should be mandatory for certified inspectors with an adequate number of CE hours required every two years.

Technical Specification 5

Examine the inspection and collection of inspection data policies and procedures established and used by the My Safe Florida Home program and the inspection and collection of inspection data policies and procedures used by private market inspection

¹⁷ Statistically significant at a .05 level of significance (t-statistic of 4.93).

firms. Compare and develop minimum inspection standards related to the procedure and collection of inspection data, and determine the best practices that should be established by a state-wide hurricane mitigation inspection system.

The MSFH program data policies and procedures

The amount of data and storage capabilities created a significant challenge for the MSFH program. The inspection gathering instrument was a six-page document and this information was then entered into the state's system. Initially, the data was entered into a Microsoft Access data program which the State called DBDDs (Database and Dispatch System and pronounced "DIBBS").

On July 1, 2007, at the direction of the Florida Legislature, the Office of Insurance Regulation developed and implemented a standardized form for compiling the data and reporting features of the home to an insurance company. The development and approval of the Uniform Mitigation Verification Inspection Form (OIR-1802) greatly aided in the standardization of inspection data. At the same time, the MSFH program received a 90-day authorization (EMERGENCY OIR – B1- 1804) to complete the Uniform Mitigation Verification Inspection Form for the homes that had a MSFH inspection completed between the beginning of the program and the end of October 2007. A program was developed to do this electronically and issue the report to the homeowner. The State maintained this data.

The WCEs were required to keep copies of the OIR 1802 forms for the inspections that were completed and be able to provide them to MSFH if requested. However, MSFH did not specify how those records were to be maintained. Some WCEs developed proprietary web-based programs to produce the 1802 forms, including labeled photographs. Other WCEs issued the 1802 forms as a paper copy and were required to maintain copies of the completed forms.

In November of 2007, the program extended the contracts of eight of the WCEs. As a part of this contract extension, the State required WCEs to issue the Uniform Mitigation Verification Inspection Form to homeowners.

In May of 2008, the MSFH program instituted a new web-based program called WINGS (Wind Inspection and Grant Management System). The web-based system allowed for much easier data entry than the previous system. The WINGS system had checks in place to prevent the inclusion of conflicting information in data fields and it allowed for the entry and storage of up to 20 photographs per inspection.

The ease of the data entry into the WINGS system reduced data input errors. The inclusion of photographs allowed the WCEs to compare the photographs to the data in the report and ensure consistency prior to the submittal of the inspection report. The WINGS system also allowed both WCEs and the MSFH program to more easily answer homeowner questions regarding the report because the data and photographs were more readily accessible.

The WINGS database structure contains tables for Quality Assurance inspection information; however, these tables are empty because this section of the WINGS database was never implemented. When Quality Assurance inspections found inaccuracies in original inspection data, the original inspection data was updated in WINGS. Since original inspection data was overwritten, WINGS cannot be used to compare original inspection data to Quality Assurance reinspection data.

Quality Assurance reinspection data was submitted by the reinspection WCEs to MSFH in spreadsheets format. The spreadsheet reinspection data was manually compared to the original inspection data in WINGS. When a discrepancy was found, an inspection review record was created in WINGS. The WCEs that performed the original inspection could browse the inspection review data to find discrepancies and to comment on the discrepancies. Once MSFH and the original inspection WCE agreed on a discrepancy, the original inspection WCE altered the original inspection data in WINGS. When the original inspection data was altered, WINGS created a new Summary Report and Homeowner Report. The tables in the 2007 and 2009 Quality Assurance Reports were generated from spreadsheet not from WINGS.

Private market inspector data policies and procedures

When surveyed, 88.6% (70/79) of private market inspector respondents report having formal policies & procedures that govern the collection and storage of inspection data. Given an open-ended opportunity within the survey to describe current procedures governing the collection and storage of inspection data, virtually all responding private market inspectors report that they retain electronic copies of the 1802 forms. Some respondents report entry of the data into Microsoft Access or another database while others scan the report, keeping a picture or pdf file. The methods and locations of storage vary widely, and include computer hard drive, external hard drive on site, external hard drive off site, CD-Rom, and web-based storage. Most report backing up the data, several of them on a daily basis. Additionally, most reported electronic retention of photographs related to features listed on the Form.

Fewer respondents also reported retention of OIR 1802 form hard copies. Some, however, expressly report destruction of individual reports as soon as the inspection (and in some cases quality assurance) is completed. Of those that keep hard copies, most keep them on site, and most that responded keep these for five years or less.

All WCEs post-MSFH have data policies and procedures in place. In describing these, WCEs especially tended to provide details regarding their data storage procedures:

Response #1. "We [have] perfected the process through our Web-based collateral management system (CMS) integrated with tried and true quality control procedures that do not exist elsewhere in the insurance industry. Further in-house development led to the creation of XML data transfer from field inspectors using a handheld PDA to transmission to CMS requiring a minimum of 6 photos and signatures since 2007. The Office of Insurance Regulations form OIR-B1-1802 has been customized for PDA's, with automated rules implemented to validate the accuracy of the data prior to saving, and data storage for historical/record keeping purposes in the event a report is ever lost or audited. The CMS is a secure socket layer to encrypt

information and provide privacy and integrity for all of (our) inspections, this web-based system has essentially rendered the entire inspection process to a paperless system. For added security sensitive information can be sent securely using our proprietary BLOWRAP™ System. So every inspection is complete.”

Response #2. “All data is collected and stored securely at our server room. The company's security policies and procedures have been reviewed by multiple carriers to ensure their data and customer information is being handled with the utmost care and security. This has included on-site visits by carrier IT departments that has confirmed industry best practices are being followed.”

Response #3. One WCE provided detail on data collection as well as storage policies: “Inspectors must present badges at start of inspection. We require pictures for every feature that is attributed to the property either to confirm or deny the presence of the existing feature. Rulers are used within the photos to indicate nail spacing as well as nail/fastener size. Clips must have picture documentation showing 3 nails on face. Hip roof - Must have all four elevations with photos of roofing detail. Inspectors are required to pull permit information on roofing to verify not just that the permit was pulled but that it was also finalized. If opening protection Hurricane rating credit is given, photo documentation of the validation sticker is required. Pictures of doors and garage doors (stickers) are also required. 100% of all files are QA'd internally through the photo documentation. The storage of information contains all documentation including full report, photos, notes, field OIR report, and homeowner release form. Educational leave behinds are presented at time of inspection. Equal care is given to the off-site backup facility, which is in a secure 24-hour storm-proof data center. No customer-level demographic data is ever sold or disclosed. Generalized Zip Code-based aggregate data is used for analysis purposes.”

Comparison of MSFH and private market data policies and procedures

Both MSFH and private market inspectors had data policies and procedures in place for information on the inspections completed. Neither the MSFH data procedures nor those in the private market, however, have generated a usable database of housing stock information regarding mitigation features. The need for a high quality, assessable database of this information is vital to developing and implementing a long-term plan to manage Florida’s catastrophic storm exposure.

Data Policies and Procedures Recommendations

- The Florida Commission on Hurricane Loss Projection Methodology recommended developing a central data storage and retrieval system. This study supports that recommendation. It is imperative that a secure, high quality database of information regarding Florida’s housing stock exposure to catastrophic windstorm damage be developed.
- The database needs to be electronically assessable (similar to the Department of Motor Vehicles or CLUE databases) for all relevant stakeholders and therefore should be

developed with input from insurers, reinsurers, regulators, catastrophe modelers, the Cat Fund, and Citizens.

- The database needs to properly address all privacy issues and concerns.

Technical Specification 6

Examine the procedures, processes, or policies established and used by the My Safe Florida Home program to help prevent fraud and the procedures, processes or policies used by private market inspection firms or insurers to help prevent fraud. Determine best practices for preventing fraud that should be established by a statewide hurricane mitigation inspection system.

The MSFH program anti-fraud procedures, processes or policies

The initial MSFH fraud prevention procedures, processes and policies were set by MSFH but it was mainly the responsibility of the WCEs to ensure that inspectors complied with the MSFH procedures, processes and policies. At the conclusion of each inspection, the inspector was required to have the homeowner or homeowner representative, over the age of 18, sign an acknowledgement that the inspection was conducted and no damage was done to the homeowner's property. It was primarily up to the WCEs to monitor inspector adherence to procedures, processes and policies. In addition, both the WCEs and MSFH had quality assurance programs (discussed below).

The MSFH program had a very detailed process for inspectors to follow in preparing for and conducting the inspections. These procedures, processes and policies were outlined in the "Wind Certification Entity Inspector Training Program Resource Manual". The manual (See Appendix TS-6) was provided to inspectors for the 8-hour training class and provided detailed instructions on setting up and conducting the inspection.¹⁸ The manual discussed how to set up the appointment (including suggested script), what survey tools were required and instructions on what to do when the inspector arrived at the inspection.

The Resource Manual contained detailed instructions on how to complete the inspection and the Survey Checklist. The Resource Manual has detailed instructions on all aspects of the inspection including determining the roof shape, locating roof to wall connections, utilizing a Metalls scanner to determine nail spacing on the roof deck, and indentifying rated window and door protection products. WCEs were required to make certain that their inspectors followed these instructions.

On November 1, 2007, the MSFH program added a requirement to the WCEs contract that required inspectors to sign the Survey Checklist (Appendix TS-7) to certify the accuracy of the data reported on the checklist. The Survey Checklist is a six-page document that inspectors utilized to gather the inspection data. The front page contained a location for the homeowner to

¹⁸ The inspector's manual is nearly 350 pages long. The first section (pages 1-29) is included in the appendix. The full manual is available on the CD-ROM.

sign, indicating that inspector had completed the inspection and not harmed the residence. This modification added a space for the inspector to sign and date the form. WCEs were required to maintain the front page of this inspection form where the signatures were contained.

Also in November of 2007, the MSFH instituted a requirement that all windows and doors had to be measured and included on the Survey Checklist. Initially, inspectors were allowed to estimate the opening sizes, but the Quality Assurance Review showed a wide discrepancy in the estimates. The change was designed to reveal a more accurate accounting of the openings so the MSFH could provide an accurate estimate for the cost of adding shutters or impact protection to the openings.

With the advent of WINGS, inspectors were required to include labeled photographs of the inspection. The photographs assisted in preventing fraud in the program because the photographs were included in the same file and could easily be compared to data on the survey form.

The survey questionnaire for WCEs included an opportunity for respondents to describe their anti-fraud procedures. Following are excerpts from respondent comments:

Response #1. “100% of inspections are reviewed. Zero tolerance towards deceptive inspectors.”

Response #2. “All inspectors are monitored for QA; all inspectors currently conducting wind inspections are employees of our firm and subject to termination of employment for any inappropriate, incompetent, or deceptive behaviors.”

Response #3. [The firm] has done every possible thing to prevent fraud. Our inspection report is unique to include [our] logo, [our] case number, and digital photographs with a notes section for additional comments to support decisions. Every report is digitally and manually reviewed prior to delivery by e-mail or US mail. We’ve had many occasions of underwriters contacting [us] due to suspect reports having [our] name on it. Underwriters have learned the quality of [our] reports and will and have denied suspect reports ... [Our] inspectors are also required to wear their badge while on-site for any (of our) inspection.

The private market inspectors anti-fraud procedures, processes or policies

When surveyed, 65.3% (32/49) of private market inspector respondents reported following a formal set of anti-fraud policies & procedures. Their survey questionnaire also included an opportunity for respondents to describe these procedures. Excerpts from respondent comments follow:

Response #1. “The inspector has 2 state of Florida professional licenses on register. He adheres to the ASHI code of ethics.”

Response #2. “All photos and inspection reports are reviewed prior to releasing the OIR 1802 form.”

Response #3. "...Sticker of home owner info is shot in photo with homeowner to sign after completed."

Response #4. "Our QC reviews are as stated before. For inconsistencies (if ever found). A conference with the inspector is conducted to establish his/her reasoning for the mistake. If blatant deception is found to be present. The inspector will no longer provide services for the company, a new inspection would be issued, all previous work conducted by the inspector would be reviewed for inaccuracies and re-inspection requests would be issued to the insurance agent for any inspection warranting it. For single occurrences, a conference is held and a 'mark' is put against the inspector only if it was out of naivety and not blatant disregard/deception. If the issue was found to be systemic, the inspectors contract with our firm is terminated. More than two minor occurrences will also cause the inspector to face termination."

Comparison of MSFH and private market anti-fraud procedures, processes or policies

When evaluating survey responses from private market inspectors, particularly with regard to policies and procedures in place, two points of note are in order:

1. Private market inspectors having anti-fraud programs are more likely to respond to the survey as well as to specific program questions; and
2. Many private market inspectors that report having an anti-fraud program describe that program informally as one of "The buck stops here," i.e., a program hinging on the ethics of their leadership.

Surveyed inspectors – both WCEs and private market inspectors – were asked whether they included color photos to corroborate their findings. Virtually all private inspectors and 100% of WCEs reported such a practice. Yet when agents were asked what percent of submitted 1802 forms included color photographs, responses varied widely, with many agents reporting that 25% or fewer actually included color photos. Insurers were asked a similar question regarding just the 1802 forms submitted from within the MSFH program (looking for a categorical rather than a percentage response). Although four of 10 responded that "Some Do", only one respondent offered an affirmative "Yes."

Best practices for anti-fraud procedures, processes or policies

Most screening, certification, qualification standards, training and continuing education, and data procedures are in place to limit fraud. In addition to the recommendations in those areas above, and the quality assurance recommendations below, we recommend pictures be stored in the database with unique property identifiers visible in the picture for each mitigation feature. This leads to the recommendation that the Financial Services Commission adopt the revised OIR-B1-1802 form.

The current OIR-1802 does not require photographs to verify mitigation features. The Financial Services Commission is scheduled to vote on a new OIR-B1-1802 (Rev. 02/10) form. The new form requires photographs to be included for some mitigation features.

The new OIR-B1-1802 (Rev. 02/10) requires at least one photo documenting the existence of each visible and accessible construction or mitigation attribute marked in Section 3 through 9 must accompany this form. Sections 3 through 9 are:

1. Roof Deck Attachment
2. Roof to Wall Attachment
3. Roof Geometry
4. Gable End Bracing
5. Wall Construction Type
6. Secondary Water Resistance (SWR)
7. Opening Protection

In addition to the photo documentation, the revised OIR-B1-1802 also spells out the current penalties for fraud below the signature box for both the inspector and homeowner. No such notification is in place on the current OIR 1802 form. The current form states: “In my professional opinion, based on my knowledge, information and belief, I certify that the above listed statements are true and correct.”

For the inspector, the new form states:

<p style="text-align: center;">Individuals signing this form must have their license or certificate in an “Active” status at time of the inspection.</p> <p>I, _____ am a qualified inspector and I personally performed the inspection or had (print name) my employee (_____) perform the inspection and I agree to be responsible for his/her work. (print name)</p> <p>Qualified Inspector Signature: _____ Date: _____</p> <p>_____</p> <p>An individual or entity who knowingly provides or utters a false or fraudulent mitigation verification form with the intent to obtain or receive a discount on an insurance premium to which the individual or entity is not entitled commits a misdemeanor of the first degree (Section 627.711(3), Florida Statutes). The Qualified Inspector who certifies this form is strictly liable for all acts, statements, concealment of facts, omissions, and documentation provided by his or her employee who actually performed the inspection.</p>
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For the homeowner, the new form contains a similar warning.

<p>Homeowner to complete: I certify that the named Qualified Inspector or his or her employee did perform an inspection of the residence identified on this form and that proof of identification was provided to me or my Authorized Representative.</p> <p>Signature: _____ Date: _____</p> <p>An individual or entity who knowingly provides or utters a false or fraudulent mitigation verification form with the intent to obtain or receive a discount on an insurance premium to which the individual or entity is not entitled commits a misdemeanor of the first degree. (Section 627.711(3), Florida Statutes)</p>
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This new requirement establishing photographic evidence of features and the notification of should improve the overall quality of inspections.

Technical Specification 7

Examine the quality assurance program used by the My Safe Florida Home program and the quality assurance program used by private market inspection firms. Compare and develop minimum standards for a well-developed quality assurance program.

The MSFH quality assurance program

The initial quality assurance program in MSFH had the following components. Each WCE was required to have a Quality Assurance program in place which included a re-inspection component. This required the WCEs to have a program whereby inspectors were required to reinspect other inspectors work.

The State had a re-inspection component as well. The State hired an outside firm to conduct reinspections of 5% of the re-inspections completed by any WCE. The State also hired an outside firm to audit the WCEs in their compliance with various program goals, including making certain that the WCE had all of the required documentation on each inspector.

With the second round of WCE contracts awarded in April of 2008, additional Quality Assurance requirements were put into place to prevent fraud. WCEs were required to have a reinspection program which included a mandatory 5% reinspection rate.¹⁹ In addition, each WCE was required to provide to homeowners, a bounce back quality assurance card which asked homeowners to provide information about the inspection such as: Was the inspector on time? Did the inspector go into the attic? Was the inspector's appearance neat and professional?

The private market inspectors' quality assurance programs

Based on survey results, 57.9% (44/76) of private market respondents report having a quality assurance program. Of these, most described one or more of the following QA policies:

- Verified by photos
- Sampled audits
- QAs, some of them using in-house staff while others using outside WCEs
- Use of outside data (such as from Google Earth) to corroborate findings

One inspector described: "All inspections are cross referenced with the latest and readily available state and county information per each inspection. We have quality control personnel in our office to handle full reviews of our inspections. QC reviews take into consideration certain factors when reviewing each inspection i.e. building age, builder (if available), region, distance

¹⁹ The WCEs self-reported to MSFH how often reinspections were completed. There was no separate entry into the WINGS program to acknowledge a property was reinspected within the WCEs own reinspection program. If an error was found on the reinspection, the WCE would update that information in WINGS.

to shoreline, permit data, furnished receipts from work completed (if any), digital pictures of all systems (when accessible for in office confirmation. We also have the availability of certain agents and company underwriters that we are able to keep in constant review with regarding our accuracy levels being that most sizable companies are now conducting re-inspections.”

Comparison of MSFH and private market quality assurance programs

All WCEs, post MSFH, have QA programs. Following are excerpts from descriptions of individual programs:

Response #1. “All (our) inspections are entered into our proprietary inspection software prior to submission to the Quality Control Dept. The software contains hundreds of validation checks, including the comparison of every answer given to the age of the home, age of the roof, and county in which the home is located. Unlikely answers or combinations of answers are flagged for further review and confirmation/explanation by the inspector, and impossible answers or combinations of answers must be corrected before proceeding. Every inspection has been signed by the individual who performed it, who is putting a license of value on the line. The chain of accountability is clear and unbroken. Our company's name and number is also on the inspection and stands behind all customer service requirements to ensure all aspects of quality are being addressed. All (our) inspections successfully submitted are reviewed, along with mandatory notes and 8-12 digital photos, by a P.E. or a spe[cialist].”

Response #2. “100 % photo QA of inspections, homeowner survey cards and ride along inspections with new inspectors or inspectors who are flagged during photo QA process.”

Homeowners insurance agents were asked about their satisfaction with the quality and accuracy (Q&A) of OIR 1802 forms submitted, both from within and from outside the MSFH program. 476 responding agents answered both Q&A satisfaction questions. On average, agents were slightly less than satisfied with the Q&A of MSFH 1802 forms (2.18 on ordinal scale of 1-4, where 1=extremely satisfied and 4=not satisfied). They were slightly more than satisfied, on average, with the Q&A of non-MSFH 1802 forms (1.96 on ordinal scale of 1-4, where 1=extremely satisfied and 4=not satisfied). The practical significance of this difference in satisfaction may be small; the statistical significance is strong.²⁰

Insurance company executives were also asked about their satisfaction with the quality and accuracy of both MSFH 1802 forms and non-MSFH 1802 forms. Seven insurers responded to both of these questions. They reported, on average, being somewhere between satisfied and less than satisfied with both categories of forms (2.29 for MSFH forms and 2.86 for non-MSFH forms, on an ordinal scale of 1-4, where 1=extremely satisfied and 4=not satisfied). Although not quite satisfied with either, the companies, unlike the agents, revealed a slightly higher level of satisfaction with the MSFH forms.²¹

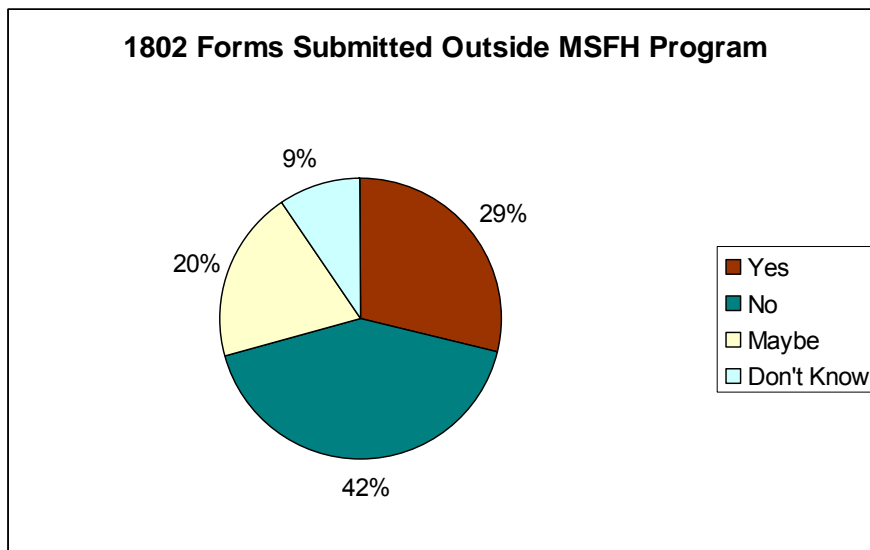
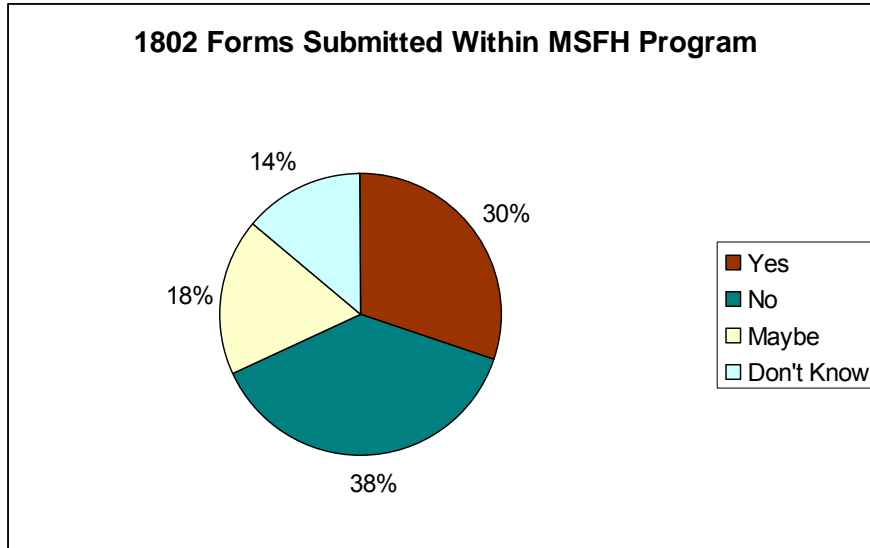
Furthermore, agents were asked: “Do you have any concerns that the information on the OIR 1802 submitted [within/outside the MSFH program] may be reporting conditions likely to

²⁰ Statistically significant at a .05 level of significance (t-statistic of 5.74).

²¹ Not a statistically significant difference at a .05 level of significance (t-statistic of -1.08).

produce insurance credits that should not be granted?” Regardless of whether the 1802 form in question was submitted from within or from outside the MSFH program, nearly one-third of respondents expressed concerns. Charts 3 and 4 below illustrate the actual agent responses.

Charts 3 and 4: Agents Response - Expressed Concerns with OIR 1802 Forms



When the insurance company executives were asked the same question – about both 1802 forms from within and from outside the MSFH program – the results were more disconcerting. Eight of ten respondents said, “Yes”, they have concerns that the within-MSFH 1802s may produce unwarranted credits. ALL insurance company respondents expressed a concern that the outside-MSFH 1802s may produce unwarranted credits.

When asked to describe their concerns, two of the insurers provided some detail:

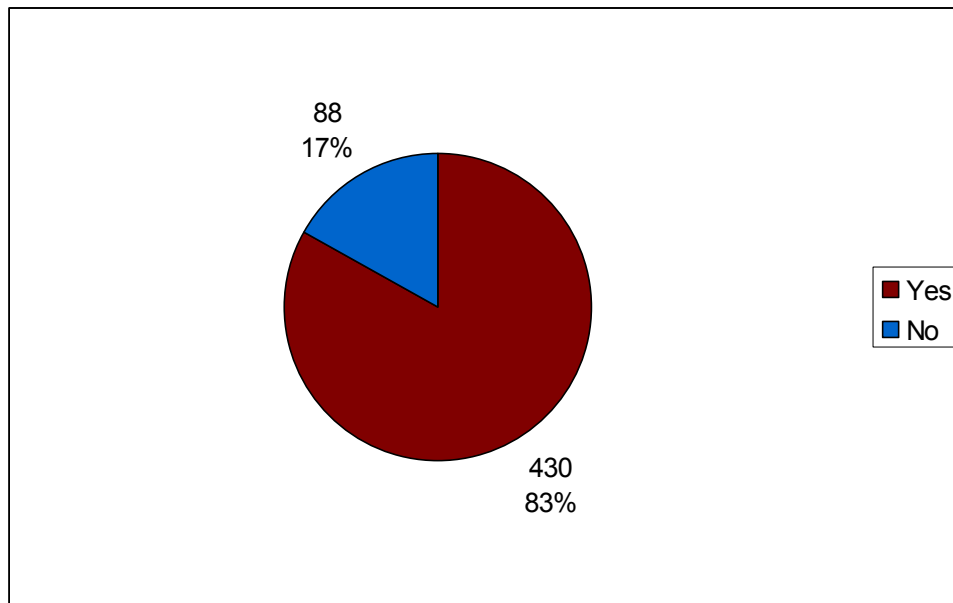
Response #1. “Credit eligibility definitions should be so clearly articulated that there is no room for interpretation. Credits too high - probably 300% too high. Credit eligibility needs to be

dependent upon entire structure's durability and additional structures. No legal recourse for false/fraudulent reporting. Should be criminal penalties for false statements. Inspectors oftentimes give the agent/insured what they're looking for.”

Response #2. “Aside from the high costs of reinspections, I think there are basic steps which can be taken to protect consumers, insurers and honest inspection companies from fraud. For one, all individual inspectors should require an individual license (i.e. don't allow inspectors to use the umbrella license of the inspection company). Second, meaningfully increase the penalties for proven fraud. Making fraud a felony would limit such activity and better protect consumers from the false belief that their home is safe in the event of a hurricane. Finally, require that all inspectors submit 1802's and pictures to consumers, insurers and DFS for review/validation/verification/random audits. Other opportunities lies within the possibility of simplifying the discount structures and process in order to make things more easily understood by all parties.”

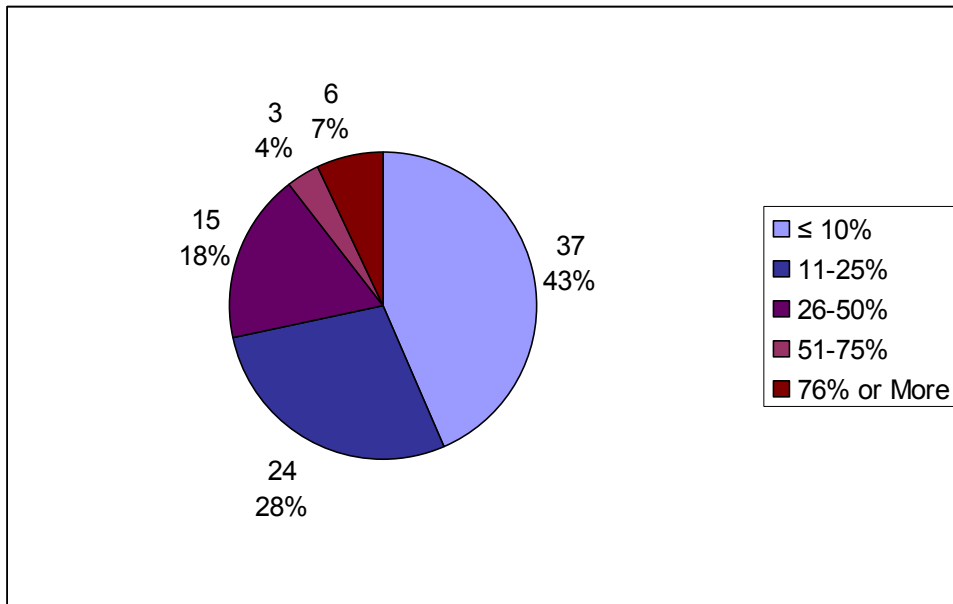
Agents were also asked whether they knew of any insurers that refuse to write coverage based on the magnitude of the credits rendered by windstorm inspections. An overwhelming 83% of respondents answered in the affirmative, as illustrated in Chart 5.

Chart 5: Agents Response - Knowledge of Insurers That Refuse to Write Coverage Based on Magnitude of Credits



When asked what percentage of insurers with whom they do business have refused to write coverage on this basis, however, most answered that 25% or fewer had engaged in such a practice. 43% responded that 10% or fewer insurers with whom they do business had refused to write coverage due to credits generated by the inspections. See Chart 6 below.

Chart 6: Agents Response - Percentage Insurers With Whom They Do Business That Refuse to Write Coverage Based on Magnitude of Credits



Minimum standards for a well-developed quality assurance program

A centralized oversight agency to certify and monitor inspectors as well as provide data collection, storage and dissemination should be considered. The Loss Methodology Commission report on Windstorm Mitigation Credits recommended a third party entity be used to manage the property inspection process. This entity can be a state agency or an independent third party. An advantage of using an existing state agency is that it would already be responsible for similar licensing, discipline and continuing education programs in other disciplines. This will help minimize the cost to the system by eliminating duplication and start-up costs.

The central agency will be responsible for:

- Licensing and discipline of inspectors
- Assigning inspectors to properties that require inspection. There are a variety of methods used in other areas that can serve as a model for assigning properties to be inspected to certified inspectors. Some methods include:
 - Random Assignment - Initially inspections can be randomly assigned to certified inspectors in the area. Once quality assurance reinspections have been completed to a level sufficient to assess an inspectors past performance, inspections assignments can be more heavily weighted to those inspectors who have superior past performance.
 - Insurer Approved Inspectors – Similar to Workers’ Compensation insurance, have the insurers create a list of approved inspectors for their insureds. Then the insured can choose from that list, or the inspector can be randomly assigned from within that list.

- Collecting the inspection fees from insurers and property owners and paying inspectors to remove the moral hazard incentives currently in the private windstorm inspection market
- Centralized data collection, storage, and dissemination of information to stakeholders (state and local government, insurers, reinsurers, state run insurers, etc...) subject to privacy concerns
- Quality assurance through a reinspection program. The reinspection program can be random at first, but should be adjustable based on an inspector's past performance.

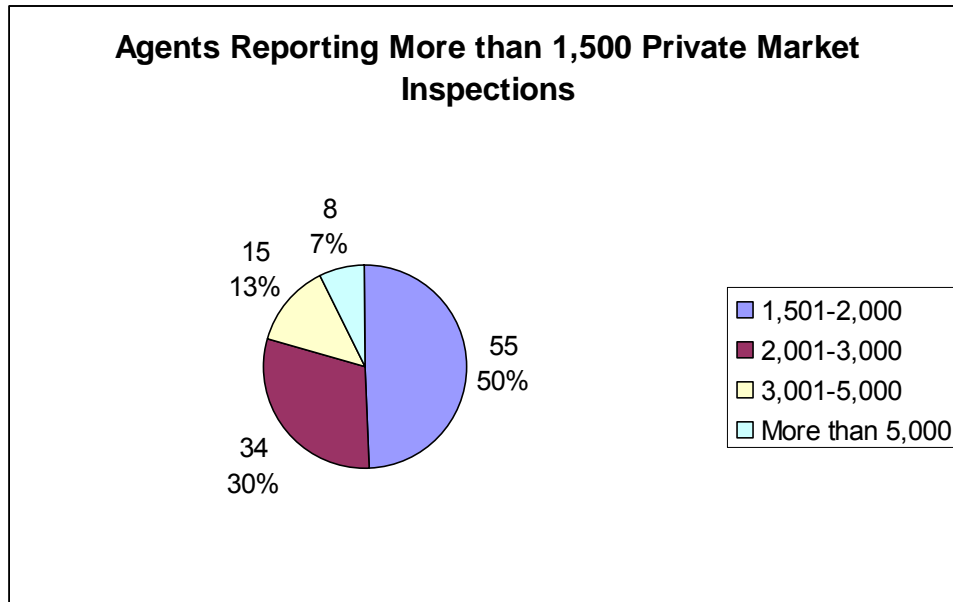
Technical Specification 8

Identify problems in the post-MSFH inspection regime (how inspections are getting done by inspectors absent the MSFH program), with an emphasis on inspection quality and fraud prevention.

Prior to analyzing problems in the post-MSFH inspection regime, some analysis was conducted to determine the size of the marketplace in question. The MSFH program was charged with conducting 400,000 inspections which would represent approximately 10% of the existing private residential properties in Florida. Presumably, the other 90% of private residential properties, if they decide to have an inspection, will be inspected by private market inspectors. However, it is difficult to determine exactly how many homeowners will decide to pay for a private market inspection. Quantifying the exact number of inspections being completed by private market inspectors is impossible without some central data gathering entity. However, some information was gathered from the surveys and the private insurer reinspection data to estimate the size of the market.

In the insurance agents survey, agents were asked how many inspections their insureds had received both inside the MSFH program and outside the program. Out of the 626 total respondents: three percent of the agents reported having more than 1,500 insureds receive MSFH inspections while 17.7% of the agents reported having more than 1,500 insureds with inspections completed outside of the MSFH program. Of these agents reporting more than 1,500 private market inspections, 20% reported having more than 3,000 private market inspections. See Chart 7 below. While these survey numbers do not give an exact percentage of private market inspections, the number of agents seeing large numbers of private market inspections is nearly six times the number of agents seeing large numbers of MSFH inspections.

Chart 7 Agents Reporting Large Numbers of Private Market Inspections



From the private insurer reinspection data, of the 864 reinspections that were verified, we were able to identify the inspector from the original OIR 1802 form in 430 cases. The original inspections on these 430 properties occurred between 2004 and January 2010, with approximately 150 of these inspections occurring during the same time MSFH was operating. The majority of these original inspections occurred in 2008 and 2009 (approximately 90%). Of these 430 reinspections, only 29 of the original inspections were completed by WCEs (6.7%). These reinspections are being done for new applicants and should provide an unbiased estimate of the percentage of private market inspections being completed in the marketplace. It is not known whether these 29 inspections completed by the WCEs were completed as part of the MSFH program or the WCE completed the inspection outside of the program.

This information does provide an opportunity to compare the error rates of the WCEs versus the other private market inspectors from this relatively small sample. Table 3 below contains the error rates by the WCEs (29 inspections) and the private market inspectors (401 inspections) found during the reinspection process. The statistical significance reported in the final column is from a two-sample T-test assuming unequal variances.

Table 3: WCE vs. Private Inspector Error Rates

	WCE Error Rate	Private Inspector Error Rate	Significant Difference
Roof Cover	27.6%	38.7% ²²	No statistical difference
Roof Deck	31.0%	46.1%	Significantly Different @ 10% level
Roof-to-Wall Connection	27.6%	45.7%	Significantly Different @ 5% level
Roof Geometry	10.3%	11.7%	No statistical difference
Opening Protection	27.6%	61.6%	Significantly Different @ 1% level
Secondary Water Barrier	0.00%	4.99%	Significantly Different @ 1% level

It appears that the WCEs have fewer errors on the original inspections than the private market inspectors. While this is a small sample size, it does provide some evidence that the training, qualification, screening and certification processes used in the MSFH program appears to reduce some of the errors that may occur in the inspection process.

Problems in the marketplace

One of the primary concerns of stakeholders involved in the windstorm mitigation inspection process is inspection error and/or fraud. Testimony received during the Florida Commission on Hurricane Loss Projection Methodology public hearings on mitigation credits indicated concern stemming from the following:

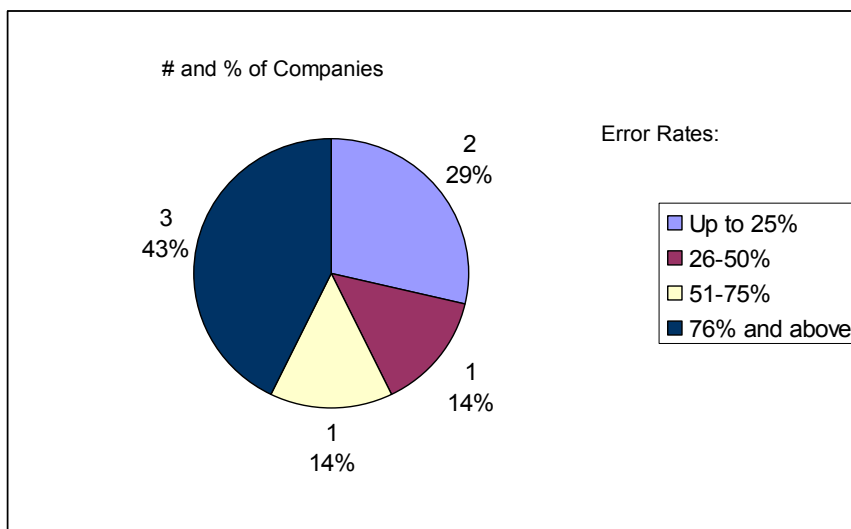
- Too little holding inspectors and/or consumers accountable
- Moral hazard
- Consumers being able to shop for inspectors to find the inspection with the highest discounts
- Photo documentation of all features
- Lack of consistency, training, education, certification
- Lack of governance of inspectors

When insurance company respondents were asked for the overall error rate they have discovered among the reinspections their company has conducted, three of seven responding companies reported seeing an overall error rate of 76% or above. No respondents reported a zero error rate. The Chart 8 below illustrates the full results.

²² While the error rates may look significantly different, because of the small sample size they are not statistically significantly different from one another.

Chart 8: Error Rates Reported By Insurers

Number of Insurance Companies Reporting Inspection Error Rates



The insurance company executives were asked additionally for the percent of homeowners that the inspection errors favored versus not favored. All four company respondents reported that 1-25% percent of homeowners were NOT receiving discounts for which they were entitled. The four companies were split as to what percent of homeowners were receiving discounts for which they were NOT entitled. One each responded 1-25%, 26-50%, 51-75% and 76% and above, respectively.

It is important to evaluate these reinspection-related responses together. Synthesizing the answers to each of these questions, and regardless of the variation in response, clearly companies that responded to the survey hold an overall perception that a substantial number of inspection errors have occurred. Furthermore, there is clear indication that they also hold the opinion that more of these errors have favored homeowners (with unwarranted higher credits and lower insurance premiums) than not.

Anecdotal Evidence

Testimony received in the public hearings on the Windstorm Mitigation Discounts Report conducted by the Florida Commission on Hurricane Loss Projection Methodology indicates extremely high error rates on the OIR 1802 forms. The Florida Association of Insurance Agents presented error rates as high as 55-80% depending on the region of the state. AmeriPro Inspection Corporation reported error rates between 68 and 78%.²³

Reinspection Programs

²³ See "Windstorm Mitigation Discounts Report", Florida Commission on Hurricane Loss Projection Methodology, February 1st, 2010.

It appears from the reinspection data gathered that the most common errors found in the inspection process deal with window and door openings and their hurricane protection levels. In the MSFH 2009 Quality Assurance report the three most common error classifications were the count of hurricane protection rated windows (25.7 % error rate), the bracing of gable ends (24.1 %), and the count of hurricane protection rated doors (22.4 %).²⁴ The bracing of the gable ends has no impact on insurance premium since there is no discount for bracing gable ends. However, the window and door errors may impact premium levels.²⁵

In the Citizens' Reinspection Pilot Study (preliminary results, see Appendix TS-8), opening protection (56.86 %), roof-to-wall attachment (46.9 %), and roof cover (38.50 %) were the top three categories where changes were made as the result of the reinspections. Similarly, not all of these changes resulted in premium changes, and a single reinspection could generate multiple errors.

It is difficult to compare error rates from the MSFH program which were reinspections of randomly selected properties with error rates from most insurers and Citizens' reinspection programs because these programs, unlike the MSFH program, are generally not random samples of insured properties. Thus, these reinspection programs introduce a selection bias into the analysis. This selection bias will likely increase the error rates found in these insurer reinspection programs as properties are selected for reinspection based on some indication that the original OIR 1802 form is incorrect, not a random sample as used in MSFH.²⁶

For example, Citizens has not reported how the original approximately 500 personal residential properties were selected for reinspection. The properties do however share common characteristics:

- They were built prior to 2002
- They receive mitigation credits greater than \$150
- They are not mobile homes; and
- They do not have hip roofs²⁷

These characteristics chosen for the reinspection program are characteristics found in over 20% of the personal residential property policies sold by Citizens. The results of the Citizens pilot reinspection program indicate a substantially higher error rate than that found in the MSFH

²⁴ A single reinspection could result in multiple errors found. For example, one property could have had an error on the braced gable ends and the count of hurricane protected windows.

²⁵ The error rates reported in the 2009 Quality Assurance report for window and door hurricane protection count may not result in a change in premium. For example, if the original inspection found 4 windows with hurricane protection, and the reinspection found only 3, the error would count in the error rate. If the home had 8 windows it would not have received an opening protection discount because not all openings are protected, therefore the error would not result in a premium change.

²⁶ Another issue with comparing the error rates between MSFH and Citizens and private insurer reinspection programs is the error reporting process. As state earlier, MSFH allowed the original inspector to review the QA reinspection and it was then determined if the original inspection, the reinspection or both inspections were incorrect. This process reduced the number of errors reported because in many cases the original inspection was correct. This process was not followed by Citizens or the private insurers. Thus, errors made during the reinspection could be counted as errors made by the original inspector.

²⁷ See page 3 of the Personal Lines Reinspection Preliminary Report, Appendix TS – 8.

Quality Assurance reports. Of the 452 properties inspected, 350 (77.4%) had errors on the OIR 1802 form that altered the amount of premium that should be paid. Of those 350 properties, 311 properties should have been paying a higher premium (89% of errors in insured's favor) while 39 properties should have been paying a lower premium (11% of errors in Citizens' favor).

Reinspection information provided by a private insurer provides more evidence of the rate in errors in inspections in the current market. This reinspection program involves a more generic selection process than Citizens. The reinspection data provided was for properties in Miami-Dade County:

- For all new policies issued in which the insured submitted an OIR 1802 form
- For all new policies issued in the last four months in which the insured submitted an OIR 1802 form

In addition, this insurer has different marketing strategies and underwriting guidelines than Citizens, which results in a book of business that leans more heavily toward post-2002 construction. This sample of reinspections found the following as the top three categories of errors: roof deck (62.73 %), roof cover (62.62 %), and opening protection (62.27 %).²⁸ While these error rates are higher than Citizens, they do not have the same premium impact as the Citizens reinspections. The Citizens reinspections had an average premium per policy reinspected increase of \$893.85 while the average premium per policy reinspected increase from the private insurer was closer to \$160.00. This is representative of the differences in marketing strategy, underwriting guidelines and book of business incorporated by private insurers. The private insurer's reinspection program had a higher rate of errors that when corrected would actually lower premiums than Citizens did. For example, of the 337 OIR 1802 forms that had the roof cover blank, 336 of those properties actually had FBC equivalent roof cover which would qualify that property for a mitigation discount. The category with the highest rate of errors that when corrected would no longer qualify the property for some mitigation discounts was the opening protections category, where more than 87% of the errors in that category resulted in unwarranted mitigation discounts.

From a statistical standpoint, the Table 4 shows the error rate differences among MSFH, Citizens reinspection program and the private insurer reinspection program. All error rates are significantly different from one another.²⁹

²⁸ In this data, 39 % of both roof cover and roof-to-wall attachment fields in the original 1802 forms were blank.

²⁹ Paired T-test with unequal variances were run for all pairs of error rates. All error rates were significantly different from one another at the 1% level except for the difference between Citizens' and the private insurer opening protection error rates which were significant at the 5% level.

Table 4: Error Rates

	Opening Protection	Roof Cover	Roof Deck	Roof-to-Wall Attachment
MSFH ³⁰	24.07 % Windows 24.04% Doors ³¹	7.20%	11.57%	6.07%
Citizens	56.86%	38.50%		46.90%
Private Insurer	62.27%	62.62%	66.73%	

³⁰ Data from 2009 Quality Assurance Report.

³¹ Neither Citizens nor the private insurer broke out the opening protection errors by windows and doors. The minimum error rate for MSFH on opening protection is 24.07%., assuming that every inspection that had a window error also had a door error. The highest the error rate for MSFH could be for opening protection is 48.11%, assuming that no single inspection had both window errors and door errors. The true error rate for opening protections for MSFH is somewhere in between those two numbers. The T-test performed here assumed the worst case for MSFH, with an error rate of 48.11%. This error rate is still statistically significantly lower than either the Citizens or private insurer error rates.