



Regional Workshop Wind Mitigation

Hardee County – December 13, 2012

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EXPERIENCE

Disaster Strategies and Ideas Group (November, 2006 – Present)

Senior Emergency Management/Homeland Security Manager primarily focused on the development of County Mitigation Strategies, Communication Plans, Disaster Housing Plans, Logistics Plans, Long Term Recovery Plans, and updating Comprehensive Emergency Management Plans and more. Development and execution of many local government workshops on EM/HS plan execution, and roles and responsibilities of all key members. Engaged with providing assistance to the Florida Division of Emergency Management in closing out Project Worksheets for Hurricanes Wilma, Katrina, and Dennis in South, and West Florida counties. Development of the Florida Energy Assurance Plan for the Governor's Energy Office (2011). Participate in numerous local government EM/HS exercises.

L-3 Communications (February, 2006 to November, 2008)

L-3 Team member on various projects for the Federal Department of Homeland Security (DHS), including development of operations plans for the DHS master planning scenario (*Improved Nuclear Device*). Team member on the development of a trend analysis for DHS/FEMA on the overarching, recurring emergency management/ homeland security trends and issues, which gave DHS/FEMA the data necessary to address these issues in the short, medium, and long term, and chronicle their progress. In addition, team member on the development of the *Gulf Coast Mass Evacuation and Capabilities Enhancement Project*, which was designed to estimate the gaps and shortfalls in the Gulf Coast Risk State's (Texas, Louisiana, Mississippi, Alabama) capabilities to respond to a catastrophic event similar to Hurricane Katrina, and adjoining host states' capabilities to assist.

Team member on the *Analysis of Federal Requirement on States* project, which identified all Federal programs and regulatory requirements placed on States by DHS through various grants, legislation, and policies. Team member on the review of *Target Capabilities List (TCL) and TCL Performance Measures and Metrics*, and prepared an extensive report for FEMA. Lastly, team member on *National Plan* review for the two States hardest impacted by Hurricanes Katrina and Rita (Texas and Louisiana) and the nine Urban Area Security Initiative (UASI) cities in both States to determine each jurisdiction's capability to prepare for, respond to, and recover from a catastrophic disaster events.

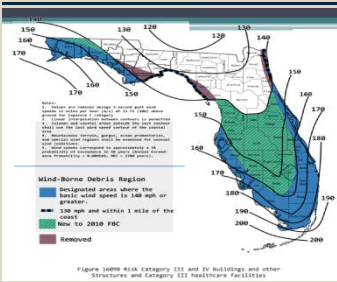
Florida Division of Emergency Management (May 1979 – January, 2006)

Help a variety of positions at FDEM to include Bureau Chief Planning, Chief of Operations, Chief of Policy and Planning, and Chief of Recovery and Mitigation, which oversaw recovery and mitigation activities for all declared disasters in Florida. Also oversaw the State Assistance Office of the National Flood Insurance Program, and the Community Rating System. Served as the Deputy State Coordinating Officer for Hurricanes Charley, Frances, Ivan, Jeanne in 2004, and Hurricanes Dennis, Katrina, Rita, and Wilma in 2005. Also served as the National Emergency Management Association's representative to the NFPA-1600 Emergency Management Technical Advisory Committee, and the National Community Rating System Task Force. Served on the Board of Directors of the Florida Governor's Hurricane Conference, and as the chairman of the National Hurricane Conference Mitigation Committee and member of the Program Committee.

EDUCATION

1983 Masters in Public Administration, Florida State University

1982 Bachelor of Science in Criminology, Florida State University



Leadership Awareness

A County Commissioners' Guide to Wind Mitigation Programs and Applications

Summary Document



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Acknowledgements

“A County Commissioners’ Guide to Wind Mitigation Programs and Applications” was developed under a grant awarded to the Florida Association of Counties through the Residential Construction Mitigation Program (RCMP) which is administered by the Florida Division of Emergency Management (FDEM). This was done for purpose of promoting awareness of wind mitigation programs to county commissioners and constitutional officers, who are those ultimately responsible for enacting the provisions identified in this document.

The FAC wishes to thank the FDEM Bureau of Mitigation for their assistance in developing this course. The FAC also wants to thank *Disaster Strategies and Ideas Group, LLC* for their assistance in developing the materials for this course in concert with FDEM/Bureau of Mitigation.

This material will be shared on a consistent basis with current and future county commissioners as part of the FACs Certified County Commissioners Core Courses. It will be updated as materials change. This course will be available beyond this pilot for many years, with the achievable goal of educating every local elected official on wind mitigation programs.

Executive Summary

All disasters are local. Florida's 67 counties are led by 377 county commissioners who represent the unincorporated majority of the population in the State of Florida. As such, commissioners are entrusted by Chapter 252.38(3)(a)1, Florida Statutes with the responsibility to:

"...appropriate and expend funds; make contracts; obtain and distribute equipment, materials, and supplies for emergency management purposes; provide for the health and safety of persons and property, including emergency assistance to the victims of any emergency; and direct and coordinate the development of emergency management plans and programs in accordance with the policies and plans set by the federal and state emergency management agencies."

One of the ways local governments can "provide for the health and safety of persons and property..." is by taking full advantage of the wind mitigation programs and policies offered through the State of Florida and the Federal government. These wind mitigation programs will provide an enhanced level of protection against the effects of natural disasters that will occur in every county. Providing opportunities to reduce private and public vulnerability to known hazards not only reduces the amount of residential damages that can incur, but also reduce the costly impacts on the public infrastructure. The National Institute of Building Sciences claims that, "on average, a dollar spent by FEMA on hazard mitigation provides the nation about four dollars in future benefits."¹

No one has to look beyond the impact Hurricane Wilma had on Florida in 2005 to understand why mitigating the impacts of wind is critical. Wilma was the third most costly natural disaster in the history of the nation, yet its impacts were basically isolated in three counties. Wilma was primarily a **wind event** that had enormous impacts on South Florida. Over 6,000,000 residents lost power, some for several weeks. It is anticipated that any attempt to shave off a percentage of loss generated by such wind events will be embraced by commissioners and constitutional officers.

This course provides basic information on all of the applicable State and Federal mitigation programs, statutes, and plans available to any county/local government in Florida. This course is directed primarily to county commissioners, their key staff, and other constitutional officers and their lead staff, but can equally be applied to any local government. In any given election cycle, these members often change, and the knowledge newly elected officials need to

¹ National Institute of Building Sciences, Multihazard Mitigation Council, 2005, "[Natural Hazard Mitigation Saves](#)", Vol 1, page iii.

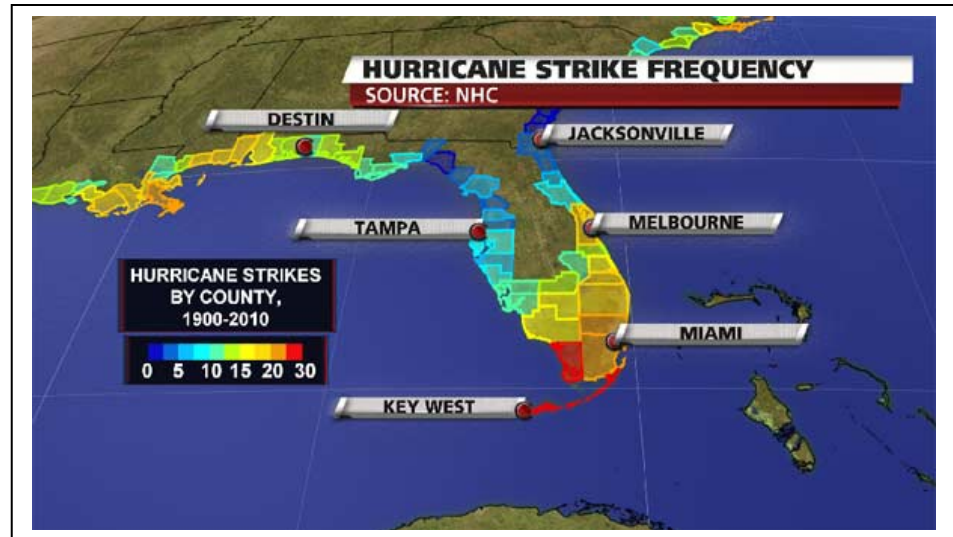
effectively implement the various wind mitigation programs is not centralized and easily ascertained.

The impact of this project will be substantial. Training elected leaders, who then manage and implement local wind mitigation programs will ensure a very large outcome for the investment. Thousands of local residents will benefit from having their leadership engaged and informed on wind mitigation programs. This course will be available beyond this pilot for many years, with the achievable goal of educating county commissioners, constitutional officers, and other local elected officials on wind mitigation programs.

I. Introduction

Every county in the State of Florida is highly susceptible to many different hazards, especially those where excessive wind can cause severe countywide damages. Hurricanes have been a fact of life since there have been residents living in our State. Florida is the most vulnerable state in the nation to the receipt of a hurricane, and their associated damages.

Will it happen to your county? Yes, it will in Florida. It is not a matter of “if”, but “when”. As a county commissioner or constitutional officer, you will be responsible for responding to and recovering from such events. Damages to both private and public infrastructure will be significant, and will



Source: The Weather Channel²

mandate quick and decisive action by you and the other members of the Board. No county in Florida is safe. Both inland and coastal counties will feel the effects of wind.²

That is why this course has been developed. Mitigating future wind damages through the current available programs, plans, and statutes is doable if there is interest expressed on your part to take advantage of them. Doing nothing could have catastrophic consequences. If such an event happens on your watch, the more your county mitigates future wind borne losses, the quicker you will be able to return to normalcy.

A. Sample Historical Wind Events and Impacts

Consider the following facts concerning past events and the impacts they have had. In 1992, **Hurricane Andrew** went from a tropical storm to a Category 5 hurricane in less than two days.

² This Weather Channel graphic was generated using data from the National Hurricane Center.
http://www.weather.com/weather/hurricanecentral/article/hurricane-strike-frequency_2011-08-12

Its path of destruction in Miami-Dade, Broward, Palm Beach and Monroe County was significant and long lasting. Much of the damages were generated by wind.

These impacts include those listed here:³

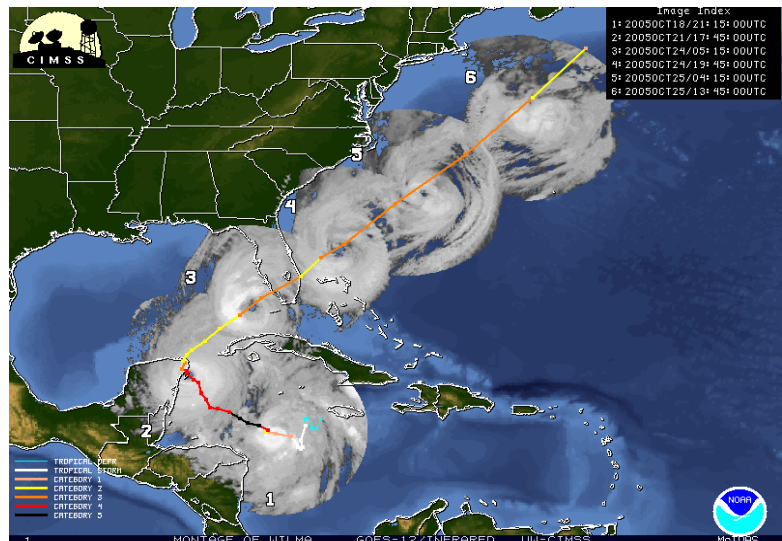
The recovery from Hurricane Andrew took over 15 years and dramatically impacted South Florida for many years.

Similarly, **Hurricane Ivan** in 2004 had similar impacts in the Florida panhandle. It impacted counties from Bay to Escambia and inland to the Alabama/Georgia border. Ivan resulted in \$14B in damages, 14 fatalities, and over 135,800 residents who had impacts to their homes. Fifty-six shelters were opened hosting up to 28,951 individuals. Large-scale evacuations were ordered, and coastal infrastructure was heavily damaged.

Hurricane Wilma in 2005 is extremely significant, based on the fact that a large percentage of the damages were *wind related*. Wilma is the third most costly natural disaster to have ever occurred in the United States. Most all of the damages were in Florida, and confined mainly to three counties: Broward, Collier and Palm Beach. Wilma made landfall near Naples (Collier County) as a Category 3 hurricane, and exited over the City of Jupiter (Palm Beach County) as a Category 2 event. Wilma resulted

IMPACTS OF HURRICANE ANDREW

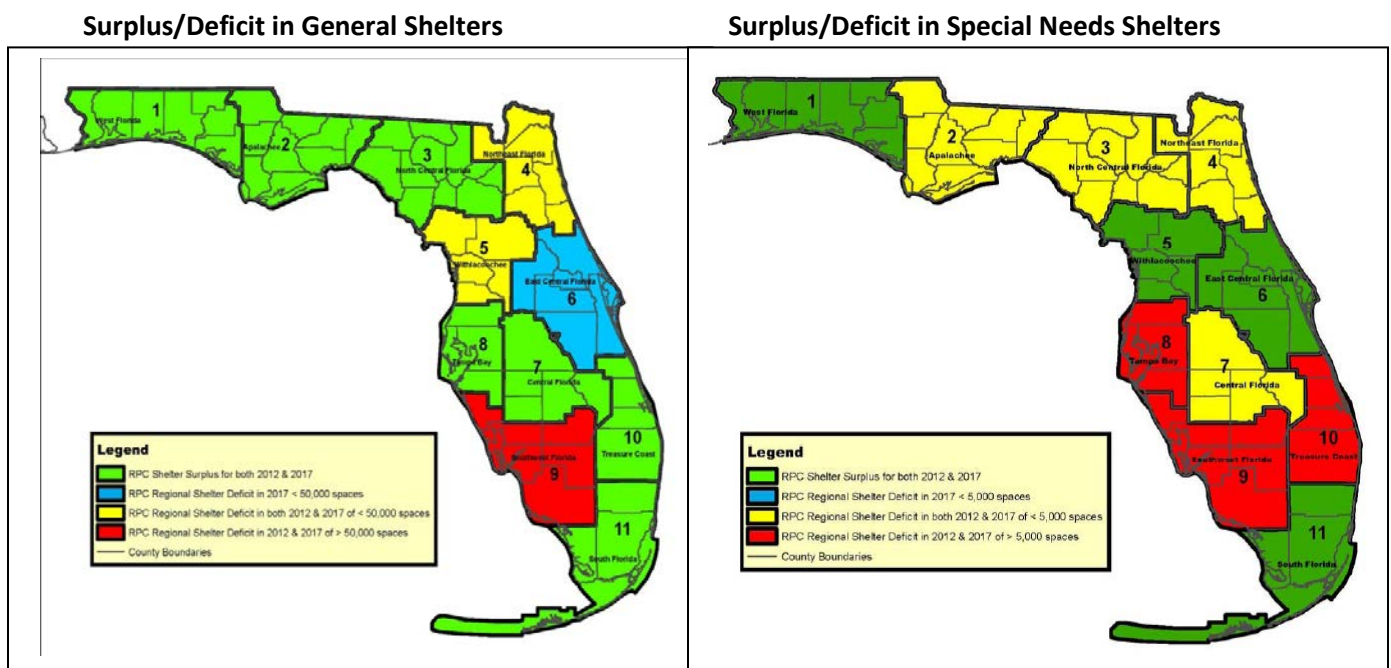
- 28,066 homes destroyed
- 107,380 homes damaged
- 180,000 persons temporarily left homeless
- 82,000 businesses destroyed or damaged (25 % never reopened)
- 120,000 jobs temporarily or permanently lost
- 32,900 acres of farmland damaged
- 31 public schools destroyed or severely damaged



³ The Governors Committee on Disaster Planning and Response Review – The Lewis Report, January, 1993, pg 1-2

in 36 deaths, and over \$21B in damages in the United States (90% of which was in Florida). The grand total for all damages when adding in The Bahamas, Cuba, Haiti, Jamaica, and Mexico was \$29B. The entire electrical distribution network in South Florida was seriously compromised. Over 6,000,000 residents lost power, some for several weeks. Wilma's winds also spread citrus canker throughout South Florida, severely impacting the orange crop for many years.

Each of these events resulted in the need to open and manage hundreds of **public shelters** for extended periods of time. There are several regions and many counties in the State that have general and special needs shelter deficits. This results in evacuations to locations outside of the impacted county.



Source: FDEM 2012 Statewide Emergency Shelter Plan, Fig 2-1, 2-2, pgs 2-7, 2-8

Given the fact that Florida has, and will continue to receive many hurricanes and incur enormous losses, it makes sense to take advantage of the wind mitigation programs available in our state designed to help mitigate such losses. The programs listed below come with funding, and varying degrees of match requirements. Unfortunately, there are years when all of the available funds are not used for lack of qualified, eligible local applications.

Therefore, this course has been designed to educate participants on the importance of wind mitigation programs, plans, and statutes that can be used to reduce the overall damages caused by wind. This is a high-level overview. More detailed information is available at every county office of emergency management.

B. Wind Mitigation Programs

There are a variety of State and Federal mitigation programs, statutes, and plans that contain wind mitigation components. If implemented, they can reduce future risk and vulnerability to all natural hazards. Each of these mitigation measures have different functions and expected outcomes, but their overall goal is to reduce the local government risk to future events.

This document provides basic information for local officials and their staffs on these wind mitigation programs and provisions. Note that there are other mitigation programs not listed here such as the *Flood Mitigation Assistance Program*, the *Community Rating System* and the *National Flood Insurance Program*, because they deal specifically with flood mitigation. This document is to be used in tandem with the course slides during training and educational events.

The plans, programs and statutes that contain wind mitigation components identified in this course include:

- **County Plans With Mitigation Components**
 1. Local Mitigation Strategies (LMS)
 2. Comprehensive Emergency Management Plan (CEMP)
 3. Post-Disaster Redevelopment Plans (PDRP)
 4. Comprehensive Plans – Land Development Regulations (COMP, LDR)
- **State and Federal Mitigation Programs**
 1. Community Development Block Grant – Disaster Funding Program (CDBG)
 2. Hazard Mitigation Grant Program (Section 404) (HMGP)
 3. Public Assistance Program – Section 406 Hazard Mitigation
 4. Pre-Disaster Mitigation Program (PDM)
 5. Residential Construction Mitigation Program (RCMP)
 6. State Housing Initiative Partnership - Disaster Funding Program (SHIP)
 7. Weatherization Assistance Program (WAP)

- **Mitigation Provisions Within State Statutes**

1. Coastal Construction Control Line (Ch 163, Florida Statutes)
2. Florida Building Code (Ch 553, Florida Statutes)

There are several other state statutes dealing with mitigation, but their focus is primarily on flood or coastal surge mitigation, and are therefore not listed here.

In the information provided on each of the above, four basic questions are answered to help educate county commissioners, constitutional officers, other local officials and their staff on wind mitigation. These include the following:

An abbreviated summary of this information is provided in *Appendix 1: Wind Mitigation Resources Available for Florida Counties – At A Glance*.

- 1. What are the wind mitigation requirements provided in the plan, program or provision in state statutes?***
- 2. What is the method of implementing these mitigation plans, programs, or provisions in statute?***
- 3. If incentives are available, what are they, how do you implement them? Is there any potential funding available?***
- 4. What is the potential mitigation benefit for the county?***

II. Purpose

The purpose of this document is to supplement the training course materials available for county commissioners, constitutional officers, and other local officials on wind mitigation programs, plans, and provisions in Florida Statutes. The demonstrated need of this project is to keep county leadership fully apprised of all available wind mitigation opportunities, programs, and ongoing efforts in order to reduce the impacts of wind-related damages on public and private property. This is fully compliant with the overarching goal of the RCMP, which is to reduce the impact of wind-related damages throughout the State and reduce the financial impact on the CAT Fund. At the conclusion of the training sessions, this course will be adjusted to accommodate any changes needed.

The listing of mitigation plans, programs and provisions in statute are separated into three categories in this document. The include:

- County mitigation plans with wind mitigation components;
- State and Federal Mitigation Programs with wind components;
- Wind Mitigation Provisions within state statutes

III. County Plans with Wind Mitigation Components

There are several local plans that have mitigation components in them that should be acknowledged and understood. They have the potential to have a significant impact on reducing future wind related losses from disasters, and are therefore listed here with a brief explanation of what each is, and what their intent is. They include:

- Local Mitigation Strategies
- Comprehensive Emergency Management Plans
- Post Disaster Redevelopment Plans
- Comprehensive Plans/Land Development Regulations

Each plan is briefly explained below:

A. Local Mitigation Strategies (LMS)

Every county has a Local Mitigation Strategy (LMS) maintained by the county and its jurisdictions to reduce and or eliminate the risks associated with natural hazards. These plans must be compiled in accordance with the Disaster Mitigation Act of 2000 (DMA 2000). DMA 2000 is a mechanism for collaboration between state and local entities that encourages pre-disaster planning, recognizes the need for mitigation, and designates funding for projects through federal grant opportunities. The LMS is updated every five years.

1. Wind Mitigation Requirement

Not only does the LMS identify the hazards a county is susceptible to, but it also identifies strategies and projects to reduce its vulnerability to future events. The LMS is the mechanism to pre-identify mitigation projects that can benefit the county. For example, such projects could include, but not limited to, the replacement of older, substandard roof systems, and replacing them with current code or code plus wind resistant systems; window protection systems on vulnerable government facilities or critical infrastructure, etc. The LMS must identify specific projects in order for them to be eligible for post-disaster funding. It is important to note, that such projects cannot be categorized as “maintenance”, but must be a clear mitigation action based on the LMS project list.

2. Method of Implementation

Once the LMS has been completed and approved (on a five year cycle), the projects listed therein are available for future mitigation funding. Many communities do not wait on a disaster to fund their mitigation projects. Instead, they often choose to implement them

before a disaster strikes and reduce the impacts to the county. The Florida Division of Emergency Management, Bureau of Mitigation assists counties in the update and review process of the LMS. They serve as a resource for technical advice, knowledge of funding sources, and general information regarding hazard mitigation.

3. Funding/Incentives Available

Unless a county has an approved LMS, there is NO federal funding available for the federal mitigation programs. Every county in the State of Florida has developed an LMS. Many are in the process of updating on a five-year cycle. It is critically important that local LMS committees keep the LMS in an active status, and kept updated, else the county will NOT be able to take advantage of available mitigation funds when they arrive.

4. Potential Mitigation Benefits for the County

By thoroughly outlining mitigation needs and identifying funding sources, an LMS will act as a county's blueprint to wind mitigation opportunities. The LMS facilitates cooperation between the state and local authorities, and provides a common platform to work collaboratively together to reduce the community's vulnerability and risk to known hazards. These efforts promote sustainability as a strategy for disaster resistance. The LMS will ensure each community is able to articulate their needs for mitigation in a priority manner, resulting in faster allocations of funding and more effective risk reduction projects. The material in this course should be used to facilitate this, and ensure that a county is obtaining as much grant funding and support for its mitigation efforts as possible.

B. County Comprehensive Emergency Management Plan (CEMP)

Chapter 252 of the Florida Statutes establishes the Comprehensive Emergency Management Plan (CEMP) as the master emergency operations document for each county. The CEMP establishes a framework through which every county prepares for, responds to, recovers from, and mitigates the impacts of all hazards that could adversely affect its people and property. It outlines the responsibilities of the government, private, volunteer, and non-governmental organizations that together comprise the county response team.

1. Wind Mitigation Requirement

Each CEMP consists of a Basic Plan, which outlines the preparedness, response, recovery and mitigation activities of the county response team. It also contains an annex for the eighteen Emergency Support Functions (ESFs), which serve as primary mechanisms for providing disaster assistance at the county level. The CEMP ensures that all levels of

government are able to mobilize as a unified emergency organization to safeguard the well-being of the county's residents and visitors. It is the plan to which all of the other county disaster plans are aligned.

Under the current guidance, the CEMP must include a mitigation section that establishes the mitigation program and course of action for the county. In the near future, this will be replaced by the County Mitigation Strategy, which provides much more detail on the county's mitigation program and efforts. Currently, each of the County Mitigation Strategies are adopted as an annex or as a supporting plan to the County CEMP.

2. Method of Implementation

Each County must have an approved CEMP addressing how it will respond to all hazards and how the CERT will operate and mitigate future disaster impacts. While the CEMP is mostly an operations-based document, it also identifies the process by which it will mitigate the hazards it is vulnerable to. The county emergency management office is responsible for maintaining and implementing the CEMP.

3. Funding/Incentives Available

The maintenance of the County CEMP is required by Chapter 252, FS. While no specific wind mitigation funding is associated with this, it will provide critical information on how the county is poised to mitigate future events, including wind driven hazards.

4. Potential Mitigation Benefits for the County

The State of Florida has put an increasing emphasis on mitigation as a critical element of the overall emergency management program, both at the State and county levels. The CEMP mitigation section identifies who is responsible for implementing mitigation in a county, and their roles and responsibilities. The Plan must be approved by the Board of County Commissioners every four years.

C. Comprehensive Plans – Land Development Regulations

Chapter 163, Florida Statutes requires each municipality and county in Florida to prepare and adopt a comprehensive plan as well as procedures to implement the plan. These procedures are commonly called Land Development Regulations, and all proposed and approved development in the community must be consistent with the comprehensive plan regulations for that community. Comprehensive plans in Florida are required to include elements that address future land use, housing, transportation, recreation and open space, capital improvements, intergovernmental coordination, potable water, storm water, sanitary sewer,

solid waste, and natural groundwater aquifer recharge, conservation of natural resources, and public school facilities. In addition, coastal municipalities and counties must prepare a coastal management element.

1. Wind Mitigation Requirement

In Section 163.3178, Florida Statutes entitled “Coastal Management” the Florida Legislature stated that its intent is to ensure that local government comprehensive plans restrict development activities where such activities would damage or destroy coastal resources and that such plans protect human life and limit public expenditures in areas that are subject to destruction by natural disaster. The coastal management element is required to contain quite a number of items relating to coastal management and development including identifying the regulatory and management techniques that the local government plans to adopt or has adopted in order to mitigate the threat to human life and to control proposed development and redevelopment in order to protect the coastal environment. The Coastal Management Element of the COMP is a powerful tool to implement wind mitigation on an area-wide basis.

2. Method of Implementation

The coastal management element identifies the regulatory and management techniques a county will use to limit proposed development in coastal areas to mitigate the cumulative impacts of disasters to these areas. It is implemented through the Land Development Regulations and enforced by the County.

3. Funding/Incentives Available

The COMP/Coastal Element is a powerful tools in the wind mitigation arsenal of the county commission. While there is no funding associated with this, the incentives are real, in that it can dramatically reduce the impacts of wind related damages in a coastal county.

4. Potential Mitigation Benefits for the County

The coastal management element can set forth the critical elements of a County’s efforts to mitigate the effects of wind during a disaster. It must not only set forth methods and techniques to protect and stabilize a County’s natural environment but also ones to limit human development and thereby curtail the damaging effects of wind. As a blueprint for development, or the lack thereof, in all areas of a County, the COMP can prioritize and emphasize wind mitigation and its beneficial financial and human effects.

D. Post-Disaster Redevelopment Plans

Coastal counties that are required to develop a Coastal Element in their COMPs are required by statute to..."contain a redevelopment component which outlines the principles which shall be used to eliminate inappropriate and unsafe development in the coastal areas when opportunities arise." ⁴ The PDRP meets this requirement, and provides much more. Making difficult rebuilding decisions in a post-disaster timeframe is extremely difficult because of the pressure placed on local officials to rebuild damaged facilities to pre-disaster conditions. The PDRP allows communities to redevelop a damaged community to be more sustainable and disaster-resilient through the participation of various community stakeholders.

1. Wind Mitigation Requirement

Although there is no specific requirement to mitigate future wind related damages, the PDRP process can accommodate a local community's desire to enhance post-disaster rebuilding by, for example, rebuilding to current wind related codes or code plus, or another wind related project it want to accomplish. The PDRP allows for major issues to be discussed and settled well before the post-disaster pressure is placed on local officials.

2. Method of Implementation

Once the county decides to develop a PDRP, it can become a part of the COMP or adopted as an annex to the CEMP or stand alone as its own plan. In either case, it should be ready to implement post-disaster. This will allow for the implementation of pre-approved wind mitigation enhancements, if they are included in the PDRP.

3. Funding/Incentives Available

Counties that have completed or are planning to complete PDRPs have utilized several different federal funding sources or, in some cases, their own resources. The most common funding source by far was the State Homeland Security Grant Program which funded plans for years 2009 and 2010.

Other counties utilized HMGP funds, while one used NOAA funding. As the National Disaster Recovery Framework rolls out there may be more opportunities. To have the most current information, counties and other local governments can join the State PDRP mailing

⁴ Chapter 163.3178(2)(f), Florida Statutes

list maintained by FDEM. As sources are identified, a notice will be sent out to interested stakeholders.⁵

4. Potential Mitigation Benefits for the County

There are significant benefits for developing a PDRP. Having a PDRP is key to a faster and more efficient recovery. Creating a process to make smart post-disaster decisions and prepare for long-term recovery requirements enables a community to do more than react, prompting post-disaster action rather than time-consuming debate. By identifying appropriate planning mechanisms, financial assistance, and agency roles and responsibilities beforehand, a community begins the road to recovery more quickly.

Having a PDRP also allows for the opportunity to rebuild communities better than they were before. Without a guiding vision, short-term decisions may inadvertently restrict long-term, sustainable redevelopment and overlook opportunities to surpass the status quo. A PDRP strengthens the recovery process, and communities benefit from assessing their risk levels and crafting a long-term redevelopment plan under non-disaster conditions.

Developing a PDRP provides local government officials, residents, and businesses the opportunity to determine long-term redevelopment goals and develop policies and procedures that will guide redevelopment. While outside resources are needed and welcomed in a major or catastrophic disaster, a locally developed Plan will best channel those resources to effectively meet the community's specific needs and goals.

IV. State and Federal Mitigation Programs

The State and Federal Mitigation Programs category includes a description of mitigation programs that can be used for wind mitigation, and have funds associated with them. They include:

- Hazard Mitigation Grant Program— Section 404 (HMGP)
- Public Assistance Program - Section 406 (PA)
- Pre-Disaster Mitigation Program (PDM)
- Residential Construction Mitigation Program (RCMP)
- Community Development Block Grant— Disaster Funding Program (CDBG)
- State Housing Initiative Partnership - Disaster Funding Program (SHIP)
- Weatherization Assistance Program (WAP)

Each program has a different focus, but can be used for wind mitigation projects.

⁵ To be placed on the FDEM PDRP mailing list, contact Matt Preston, FDEM at matt.preston@deo.myflorida.com

A. Hazard Mitigation Grant Program – Section 404

Perhaps one the most important mitigation programs that can be used to mitigate the impacts of wind and wind borne debris is the Section 404 Hazard Mitigation Grant Program (HMGP). The HMGP can be a very powerful tool at the disposal of any county that has been included in a presidential disaster declaration. Funds are available after every declared disaster in proportion to the amount of eligible damages incurred by the County. The program requirements follow:

1. Wind Mitigation Requirement

The Hazard Mitigation Grant Program (HMGP) can provide grants to State and local governments to implement hazard mitigation measures after a major disaster declaration (includes wind mitigation measures). The purpose of the HMGP is to reduce the loss of life and property due to a disaster and to enable mitigation measures to be implemented during the immediate recovery from a disaster. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

HMGP funds may be used to fund projects that will reduce or eliminate the losses from future disasters. Projects must provide a long-term solution to a problem, for example, elevation of a home to reduce the risk of flood damages as opposed to buying sandbags and pumps. In addition, a project's potential savings must be more than the cost of implementing the project (called the Benefit/Cost Ratio). Funds may be used to protect either public or private property or to purchase property that has been subjected to, or is in danger of, repetitive damage. Examples of projects include, but are not limited to:

- Retrofitting structures and facilities to minimize damages from high winds, earthquake, flood, wildfire, or other natural hazards;
- Acquisition of real property for willing sellers and demolition or relocation of buildings to convert the property to open space use;
- Elevation of flood prone structures; and securing them from the impacts of high winds and water;
- Development and initial implementation of vegetative management programs;
- Post-disaster building codes related activities that support building code officials during the reconstruction process.

There are five issues that are to be considered when determining the eligibility of a proposed HMGP project. They are listed here.

2. Method of Implementation

HMGP funding is initially available to applicants within a presidentially declared disaster area. If funding remains after all requested and eligible presidentially declared county projects are fully funded, then non-declared counties can apply for HMGP funding. Individual homeowners and businesses may not apply directly to the program; however a community may apply on their behalf.

Five Eligibility Issues

- 1. Does the project conform to Florida's State Hazard Mitigation Plan?**
- 2. Does the project provide a beneficial impact on the disaster area, i.e. the county?**
- 3. Does your application meet the applicable environmental regulations?**
- 4. Does the project solve a problem independently?**
- 5. Is the project cost-effective?**

Following a disaster declaration, the State will advertise that HMGP funding is available to fund mitigation projects. Applicants interested in HMGP funds would contact their local government to begin the application process and the local governments will work with their State Hazard Mitigation Officer to refine the grant application. Every county has a Local Mitigation Strategy (described later) that will describe projects ready to fund. The State receives project applications developed, prioritized, and submitted by local jurisdictions per their LMS Plan. The State forwards applications consistent with State mitigation planning objectives and the local mitigation strategy to FEMA for eligibility review.

3. Funding/Incentives Available

The amount of funding typically available for the HMGP under a particular disaster declaration is equivalent to 15 percent of the total disaster costs eligible under the Public Assistance (PA), Individual Assistance (IA), and Small Business Administration (SBA) Programs. Yet, because Florida has an “enhanced” mitigation plan, they are eligible for an amount of funding equal to 20% of all eligible disaster related costs. Given this could amount to the hundreds of millions of dollars, Section 404 mitigation is one of the best possible methods for a county to implement significant wind mitigation projects. The amount of funding available for each county is prorated based on the estimated amount of eligible disaster damages incurred by that county (IA, PA, SBA).

FEMA will fund up to 75% of the eligible costs of each project. The sub-grantee must provide the 25% non-federal match, which can be fashioned from a combination of cash, in-kind sources and/or global match (match based on credit given for like projects funded by state/local governments that occur during the same period of performance). Funding from other Federal sources cannot be used for the 25% non-federal share except for funds awarded under the Community Development Block Grant program from the Department of Housing and Urban Development which lose their federal identity at the local level.

As an example of the amount of funding this program can generate for use by county applicants, consider the funding allocations from the 2004-05 hurricane season. These hurricanes generated over \$451 million in HMGP funding for local governments. This represented 15% of the total disaster costs. Since these events, the State of Florida is now eligible for 20% of all eligible costs, which would have made this amount be \$603 million. That is a significant amount of funding to conduct mitigation projects.

HMGP for 2004-05 Hurricane Declarations			
Year	Disaster	DR	Total HMGP (\$M)
2004	Charley	1539	74.1
	Frances	1545	83.60
	Ivan	1551	74.10
	Jeanne	1561	69.90
2005	Dennis	1595	12.00
	Katrina	1602	7.80
	Wilma	1609	130.30
TOTAL			\$451.80M

4. Potential Mitigation Benefits for the County

The amount of funding made available to a county under the HMGP can be substantial. Every county must have an approved Local Mitigation Strategy, which guides the funding of pre-identified mitigation projects. It is therefore of utmost importance that every Local Mitigation Strategy be prepared with this in mind. The HMGP can fund both wind and non-wind related mitigation projects. It is up to the county to apply for the HMGP funds. The County emergency management office is the normal point of contact for the HMGP, but the LMS Chairperson may be a different member of the community. FDEM maintains a list of these local contact on their website.⁶

B. Public Assistance Program - Section 406

The Robert T. Stafford Disaster Relief and Emergency Assistance Act provides FEMA the authority to fund the restoration of eligible facilities that have sustained damage due to a presidentially declared disaster. Title 44 CFR §206.226 (Restoration of Damaged Facilities) contains a provision for the consideration of funding additional measures that will enhance a

⁶ <http://www.floridadisaster.org/Mitigation/Local/Index.htm>

facility's ability to resist similar damage in future events. This additional cost to bring infrastructure back to pre-disaster conditions can include additional Section 406 hazard mitigation funds.

1. Wind Mitigation Requirement

In providing discretionary authority for the addition of hazard mitigation measures to permanent work restoration, Congress recognized that during the repair of damaged components of facilities there would be a unique opportunity to prevent recurrence of similar damage from future, similar disaster events. Such measures are in addition to any measures undertaken to comply with applicable codes and standards, although such compliance, itself, could be considered a form of mitigation.

Section 406 hazard mitigation funding and Section 404 hazard mitigation funding are distinct. Section 406 is applied on the parts of the facility that were actually damaged by the disaster and the mitigation measure provides protection from subsequent events. The mitigation work must be cost effective and be reasonably performed as part of the work or measure which will reduce the potential for damage to a facility from a disaster event. Sometimes, a combination of Section 406 and 404 funding may be appropriate, where Section 406 hazard mitigation funding is used to provide protection to the parts of the facility that were damaged and Section 404 hazard mitigation funding is used to provide protection to the undamaged parts of the facility. In these instances, the application for Section 404 hazard mitigation funding must be separately submitted in a timely manner, consistent with State and local hazard mitigation plans, and approved by the State Hazard Mitigation Officer.

Hazard mitigation measures restore a facility beyond its pre-disaster design. Section 406 mitigation measures are considered part of the total eligible cost of repair, restoration, reconstruction, or replacement of a facility under the Public Assistance Program.

2. Method of Implementation

Hazard mitigation measures are identified by preparing a Hazard Mitigation Proposal (HMP). The HMP is not a form, it is simply a written description and cost of what it will take to repair the damage in such a way as to prevent it from happening again. FEMA, the State, or the applicant may identify and propose hazard mitigation measures on any public assistance project. The HMP is submitted with the Project Worksheet and describes in detail the additional work and cost associated with completing the mitigation measure. FEMA will evaluate the proposed hazard mitigation projects for cost effectiveness, technical feasibility, and compliance with statutory and regulatory requirements. In addition, FEMA

will ensure that the proposed hazard mitigation projects do not cause a negative impact to the facility's operation, surrounding areas, or susceptibility to damage from another hazard.

3. Funding/Incentives Available

FEMA and the State of Florida can provide hazard mitigation officers—at the request of the applicant—to aid in formulating 406 mitigation proposals. However, it is the county's responsibility to identify and document the mitigation opportunities during the development of a Project Worksheet. FEMA's approval and funding under Section 406 of the Stafford Act is entirely discretionary. FEMA will balance the interests in disaster resistance with the supplemental nature of disaster assistance and FEMA's obligation for the prudent stewardship of Federal disaster funds. If a 406 measure is approved, it can lead to a significant injection of federal dollars that may be used to mitigate the effects of wind on a variety of public structures. The funding cost share is Federal (75%), State (12.5%), and Applicant (12.5%). The 2004-05 hurricane season generated \$117.9M in available funding for mitigation enhancements.

406 Mitigation for 2004-05 Hurricane Declarations					
Year	Disaster	DR	Total PA PWs	Total PWs w/406	Total 406 Added (\$M)
2004	Charley	1539	9,908	615	\$6.60
	Frances	1545	12,694	591	\$10.30
	Ivan	1551	5,514	780	\$14.20
	Jeanne	1561	8,597	220	\$8.50
2005	Dennis	1595	3,786	315	\$22.00
	Katrina	1602	3,208	107	\$0.49
	Wilma	1609	32,412	2,913	\$55.10
TOTAL			76,119	5,541	\$117.19M

4. Potential Mitigation Benefits for the County

Many Project Worksheets are submitted without a HMP, and as a result the jurisdiction misses an opportunity to avoid potential future losses. Thus, it is imperative that 406 mitigation components be considered as part of every Project Worksheet. A county can request assistance from the State Public Assistance Officer to assist with developing the 406 components to each Project Worksheet.

The additional disaster resistance obtained through 406 mitigation will limit future damages, decrease insurance costs and will only come at 12.5% of the total costs. This kind of opportunity to reduce the vulnerability of a County against disasters at a 87.5% cost deferment is very important, but must be asked for and pursued by knowledgeable county officials.

C. Pre-Disaster Mitigation Program (PDM)

The Pre-Disaster Mitigation (PDM) program is a federal program created under the authority of the Stafford Act and administered by FEMA that provides for a nationwide competitive grant program to assist State and local governments with the funding to implement cost-effective hazard mitigation activities *prior* to disasters. It is available to fund wind mitigation projects at the county level.

1. Wind Mitigation Requirement

The intent of this program is to reduce overall risk to people and property, while also minimizing the cost of disaster recovery. The measures that can be taken under the program are similar to those actions taken following a disaster under the authority of the Section 404 Hazard Mitigation Grant Program. The range of eligible projects might include retrofitting public buildings against hurricane-force winds, constructing, or converting public spaces into “safe rooms” in tornado-prone areas, elevating structures in a flood plain, vegetation management to mitigate wildfires.

Proposed hazard mitigation projects must primarily focus on natural hazards but also may address hazards caused by manmade forces. The county must have an approved Local Mitigation Strategy in order to be eligible for PDM funding.

2. Method of Implementation

Only the Florida Division of Emergency Management is eligible to apply to FEMA for assistance as an applicant under this program. Counties will prepare sub-applications and provide them to FDEM. FDEM may submit an unlimited amount of sub-applications for eligible planning/project activities to FEMA for review. While private non-profit (PNP) organizations and private colleges and universities are not eligible sub-applicants, a State agency or local government may apply on behalf of the private entity.

A County must have an approved Local Mitigation Strategy (LMS) prior to submitting a sub-application for a PDM grant, and the projects must be listed on the LMS project list. If the LMS is current and approved, a County may submit as many sub-applications for mitigation projects (includes wind related projects) as it wishes. There is a PDM application cycle each year. The FY 2012 PDM grant sub-applications to the State of Florida were due at the end of August 2011, and a similar deadline will likely apply for FY 2013. The PDM applications will first be reviewed by FDEM. If approved, they will be included in FDEM’s grant application to FEMA. All PDM grant applications are peer-reviewed by FEMA and only a limited amount of projects are approved given the limited federal funding for the program.

3. Funding/Incentives Available

PDM is a pre-disaster grant program. Funding is restricted to a maximum of \$3 million Federal share per project sub-application. The Federal share will cover 75% of the project cost. Sub-applicants are required to provide the remaining 25% in matching funds. Total federal funding is limited. The national allocation for the PDM in FY 2012 is \$40 million. Although it is very competitive, Florida has historically received our “fair share” of these funds. Similar to the 404 HMGP projects, each proposed project must meet the same eligibility requirements.⁷

4. Potential Mitigation Benefits for the County

Preparing for a disaster is always safer and more cost-effective than merely responding to one. While federal funding of the PDM program is an issue from year to year, the potential ability of a county with an approved/current LMS to obtain 75% federal funding for mitigation projects is something that should not be ignored. A host of PDM projects will be identified in the LMS and once the latter is approved, a county may submit sub-applications for all the mitigation projects included therein. Essentially, a county will be obtaining wind mitigation improvements at 25% of the actual cost if a PDM project is approved.

D. Residential Construction Mitigation Program (RCMP)

In 1999, the Florida Legislature passed the Bill Williams Residential Safety and Preparedness Act. This created the Hurricane Loss Mitigation Program, (section 215.559, Florida Statutes) with an annual appropriation of \$10 million. These funds are derived from the Florida Hurricane Catastrophe Fund. A portion of those funds are diverted annually to the Residential Construction Mitigation Program.

1. Wind Mitigation Requirements

The Florida Legislature allocates funding from this appropriation to the Residential Construction Mitigation Program (RCMP) on an annual basis. Currently, the RCMP receives \$7 million annually from the Florida Hurricane Catastrophe Trust Fund, and it is to be used as follows:

- \$2.8 million is designated for the Mobile Home Tie-Down Program. Funding is provided directly to Tallahassee Community College.

⁷ See page 17

- \$700,000 is designated for hurricane research to be conducted by Florida International University to continue the development of innovative full-scale structural testing to determine inherent weakness of structures when subjected to hurricane-force winds.
- Up to \$3.5 million is to be used to improve the wind resistance of residences through loans, subsidies, grants, demonstration projects, direct assistance, and cooperative programs with local and federal governments.⁸

This \$3.5 million is generally divided between two main program categories: the Residential Mitigation Retrofit Program and Public Outreach.⁹ By collaborating with local housing authorities and non-profit organizations, the State promotes wind mitigation and provides hazard mitigation upgrades to residents. Funded activities include home retrofits, inspections, and construction or modification of building components designed to increase a structure's ability to withstand hurricane-force winds. The Retrofit Program utilizes the Florida Building Code as its standard for all retrofitting. All RCMP retrofit projects must be found to be cost-effective.

The Public Outreach component of the RCMP encompasses projects that will promote public education and public information about wind mitigation and wind mitigation related areas. The funding for educating counties on wind mitigation opportunities, for example, comes from the RCMP program. Others types of public outreach include:

- Maintenance and enhancement of wind mitigation on-line information and program visibility.
- Educating homeowners on mitigation opportunities and potential insurance discounts.
- Training in regard to wind mitigation techniques, products and procedures, codes and standards, and related areas.

2. Method of Implementation

RCMP grants are issued on a one year cycle with an application deadline that usually falls in early June. A county would submit an application for a grant [or grants], in the appropriate category. All grant contracts will end on June 30th of the following year to coincide with the state's fiscal year of July 1 through June 30.

⁸ These allocations may change as a result of the 2014 Legislature.

⁹ Note – the RCMP Advisory Committee decides which categories to focus on annually

A county may submit up to two (2) applications for a maximum grant, which is decided annually. This is a competitive program. Projects compete against one another in project categories. If approved, the grants result in cost reimbursement subgrantee agreements, or some may be established on a fixed payment schedule.

3. Funding/Incentives Available

Counties applying for RCMP funds shall be limited to one application submission per application category, with no more than two applications submissions in a state fiscal year. The funds are available on an annual cycle and there is no cost to apply except for the effort to compile the application. There is no match requirement, except additional scoring points (up to 50) are awarded to those proposals who do demonstrate local matching funds. Typically, each year, \$3.5 million is available for local grants.

4. Potential Mitigation Benefits for the County

Educating a county's residents can be a critical component of a wind mitigation effort, just as actual residential retrofit may be. The RCMP program provides the opportunity for counties to secure grants to conduct each type of activity. While the program is competitive and the total funding is limited, the regular, annual application for RCMP grants should be considered by every county.

E. Community Development Block Grant – Disaster Recovery Assistance

The United States Department of Housing and Urban Development (HUD) administers the Community Development Block Grant (CDBG) program which includes a Disaster Funding component. In response to disasters, Congress may appropriate additional funding for the CDBG as Disaster Recovery grants to rebuild the affected areas and provide crucial seed money to start the recovery process. Since CDBG Disaster Recovery Assistance may fund a broad range of recovery activities, HUD can help communities and neighborhoods that otherwise might not recover due to limited resources. Disaster Recovery grants often supplement disaster programs of the Federal Emergency Management Agency, the Small Business Administration, and the U.S. Army Corps of Engineers.

1. Wind Mitigation Requirement

CDBG Disaster Recovery funds are made available to States, units of local government, and Indian tribes that are within areas designated by the President as disaster areas. These communities must have significant unmet recovery needs and the capacity to carry out a disaster recovery program (usually these are governments that already receive Community

Development Block Grant allocations). At times, supplemental appropriations restrict funding solely to States.

CDBG Disaster Recovery grants primarily benefit low-income residents in and around communities that have experienced a natural disaster. Generally, grantees must use at least half of Disaster Recovery funds for activities that principally benefit low-and moderate-income persons. These can be either activities in which all or the majority of people who benefit have low or moderate incomes or activities that benefit an area or service group in which at least 51 percent of the population is of low or moderate income.

Grantees may use CDBG Disaster Recovery funds for recovery efforts involving housing, economic development, infrastructure and prevention of further damage to affected areas, but such use may not duplicate funding available from the Federal Emergency Management Agency, the Small Business Administration, and the US Army Corps of Engineers. Examples of these activities include:

- Buying damaged properties in a floodplain and relocating residents to safer areas;
- Relocation payments for people and businesses displaced by the disaster;
- Debris removal not covered by FEMA;
- Rehabilitation of homes and buildings damaged by the disaster;
- Buying, constructing, or rehabilitating public facilities such as streets, neighborhood centers, and water, sewer and drainage systems;
- Homeownership activities such as down payment assistance, interest rate subsidies and loan guarantees for disaster victims;
- Public services (generally limited to no more than 15 percent of the grant);
- Helping businesses retain or create jobs in disaster impacted areas; and
- Planning and administration costs (limited to no more than 20 percent of the grant).

2. Method of Implementation

HUD notifies eligible governments that funds are available and a county must then develop and submit an Action Plan for Disaster Recovery. The Action Plan must describe the needs, strategies, and projected uses of the Disaster Recovery funds. HUD generally awards noncompetitive, nonrecurring Disaster Recovery grants by a formula that considers disaster recovery needs unmet by other Federal disaster assistance programs.

3. Funding/Incentives Available

If a county has the misfortune to be in a disaster area, CDBG Disaster Funds can be a critical part of the recovery. The funds can be used to supplement other disaster recovery funds, such as those provided by FEMA, especially to assist a county's low income residents. Thus, if struck by a disaster county leadership should contact HUD to determine the availability of CDBG disaster funding for the area. The amount of funding varies widely by year.

4. Potential Mitigation Benefits for the County

The CDBG Disaster Funds can be used for a variety of purposes to assist a county recovering from a disaster. Some of these uses of funds, such as the rebuilding of homes to code, are clearly a type of wind mitigation. Hardening and improving both public and private structures is the goal of a County's mitigation plan, so the use of grant funds [that do not require any matching] to accomplish these goals would be a positive for any County. By responding to a HUD notice of availability of funds through the drafting and support of an Action Plan for the use of CDBG Disaster Funds, a County can significantly increase its ability to mitigate against the impacts of wind within its boundaries.

F. State Housing Initiative Partnership (SHIP) - Disaster Funding Program

The Florida Housing Finance Corporation administers the State Housing Initiatives Partnership program (SHIP), which provides funds to local governments as an incentive to create partnerships that produce and preserve affordable homeownership and multifamily housing. The program was designed to serve very low, low and moderate income families.

1. Wind Mitigation Requirement

SHIP dollars may be used to fund emergency repairs, new construction, rehabilitation, down payment and closing cost assistance, impact fees, construction and gap financing, mortgage buy-downs, acquisition of property for affordable housing, matching dollars for federal housing grants and programs, and homeownership counseling. SHIP funds may also be used to assist manufactured housing constructed after June 1994 in accordance with the installation standards defined in the rules of the Department of Highway Safety and Motor Vehicles.

2. Method of Implementation

SHIP funds are distributed on an entitlement basis to all 67 counties and 53 Community Development Block Grant entitlement cities in Florida. In 2011, the minimum allocation is \$350,000 and the maximum allocation is over \$8.8 million. In addition, Section 420.9078(8),

F.S. provides for the distribution of appropriated SHIP funds from the Local Government Housing Trust Fund among counties and eligible municipalities for which an emergency or natural disaster has been declared by executive order and which have an approved local housing assistance plan to implement a local housing assistance strategy consistent with Section 420.907-9079, F.S..

3. Funding/Incentives Available

Funding for this program was established by the passage of the 1992 William E. Sadowski Affordable Housing Act. Funds are allocated to local governments each month on a population-based formula. These funds are derived from the collection of documentary stamp tax revenues, which are deposited into the Local Government Housing Trust Fund. Total actual disbursements are dependent upon these documentary stamp collections.

4. Potential Mitigation Benefits for the County

While usually seen as an affordable housing initiative, SHIP program funds may also be used to fund emergency repairs after a disaster. The use of SHIP funds for such purposes allows the rebuilding of residences, including manufactured homes, to current codes and standards, which is itself an act of wind mitigation. SHIP dollars can also mitigate the human impact of disasters, as its funds can be used for such things as paying the rent or mortgage of someone living in a home in need of emergency repair.

SHIP funds are allocated as a matter of course. A County just must ensure that it actively engages in a local housing assistance plan with an appropriate program for assisting its residents.

G. Weatherization Assistance Program (WAP)

The Weatherization Assistance Program (WAP) provides grants to community action agencies, local governments, Indian tribes and non-profit agencies to fund energy saving repairs to low-income homes in all counties. The program is funded each year by the United States Department of Energy and receives supplemental funding from the United States Department of Health and Human Services.

1. Wind Mitigation Requirement

WAP grants are allocated based on a formula combining population and weather data and an average of \$2,600 may be spent on each home. An energy audit and diagnostic testing must be performed on each home. The house data is entered into a computer software program and a printout is provided. The print out is evaluated to determine the measures

that, if addressed, should reduce the energy consumption of the home thus lowering the client's monthly utility bill.

The total household income of an individual homeowner may not be more than 200 percent above the national poverty level. Preference is given to elderly (60 years-plus) or physically disabled residents, families with children under 12 and households with a high energy burden (repeated high utility bills).

Some of the types of assistance provided include:

- Address air infiltration with weather stripping, caulking, thresholds, minor repairs to walls, ceilings and floors, and window and door replacement.
- Install attic and floor insulation (floors in northern Florida counties only)
- Install attic ventilation
- Apply solar reflective coating to manufactured homes
- Install solar screens
- Repair or replace inefficient heating and cooling units
- Repair or replace water heaters

Although the WAP program is focused on energy assistance, the weatherization of homes, including the wind-proofing of the structures is a significant wind mitigation tool.

2. Method of Implementation

Each County must apply for Weather Assistance Program grants through their County WAP representative appointed by the Department of Economic Opportunity. Applications are not available online. The contact list for County WAP representatives can be located at: <http://www.floridajobs.org/fhcd/CommunityAssistanceContactList.pdf>

3. Funding/Incentives Available

WAP is a federal grant program in which a County acts as the Grantee for its residents, the eventual subgrantees. County residents that meet the program criteria can receive significant wind mitigation and energy efficiency enhancements that could improve their quality of life and reduce their energy expenses. The figures below demonstrate how impactful energy efficiency is on the life of the county's low income residents and how much money can be saved by them if a county participates in the WAP program.

- Low-income families pay an average of 18% of their annual income for energy, compared with 5% for other households.

- The average energy expenditure in low-income households is \$1,267 annually
- As estimated by the United States Department of Energy, these services save the weatherization customers an average of \$358 annually and return an average of \$2.69 in energy and non-energy related benefits for every dollar invested.

The energy savings gleaned by county residents is the main benefit of the WAP program, but the secondary wind mitigation benefits are also impactful, especially since the WAP program does not involve county funds. The maximum award for an individual homeowner is \$5,600, but the average grant is \$2,600. Florida received \$175 million for the WAP between 2009 – 2012. The program will continue as additional allocations are made.

4. Potential Mitigation Benefits for the County

The WAP program will require the County to apply for and administer the WAP grant funds. The WAP program can be extremely helpful to a County's low-income residents and will not cost them anything. As such, the program can lead to significant energy savings and wind mitigation benefits.

V. Mitigation Provisions In State Statutes

There are several places in Florida Statutes where aspects of wind mitigation are present. These include:

- Coastal Management Program - Coastal Construction Control Line
- Florida Building Code

Each of these have unique components of wind mitigation built into them, and are identified in this section.

A. Coastal Construction Control Line

The Coastal Construction Control Line [Ch. 161.053, F.S.] is one of three interrelated components of the Beach and Shore Preservation Act, which work in concert to preserve and protect Florida's beaches, while respecting the use of private property. The CCCL protects Florida's beach and dune system from imprudent upland construction that could weaken, damage, or destroy the integrity of the beach and dune system. The CCCL is intended to define that portion of the beach and dune system, which is subject to severe fluctuations caused, by a 100-year storm surge, storm waves, or other forces such as wind, wave, or water level changes. One of the design criteria that must be made prior to permitting construction seaward of the CCCL is that the construction must demonstrate how it will minimize the potential for wind and

waterborne missiles during a storm. It specifically requires all structures shall to be designed in accordance with the applicable wind standards contained in Chapter 16 of the FBC.¹⁰

1. Wind Mitigation Requirement

The CCCL establishes an area of jurisdiction in which special siting and design criteria are applied for construction and related activities. These standards may be more stringent than those already applied in the rest of the coastal building zone because of the greater forces expected. New construction as well as additions, remodeling, and repairs to existing structures are allowed seaward of the control line; however, such structures and activities, unless exempt by rule or law, require a CCCL permit from the Florida Department of Environmental Protection.

[Chapter 62B-33, Florida Administrative Code](#), provides the design and siting requirements that must be met to obtain a coastal construction control line permit. Approval or denial of a permit application is based upon a review of the potential impacts to the beach dune system, adjacent properties, native salt resistant vegetation, and marine turtles is a form of mitigation.

The implementation of a CCCL in a County can have significant mitigation results. For instance, of the 1,992 major habitable structures impacted by Hurricane Opal in 1995, 768 (or 40%) were destroyed. On the other hand, of the 576 structures permitted by the CCCL Program, only 2 (or 0.2%) were destroyed.

2. Method of Implementation

The CCCL represents the landward limit of the significant damage to upland structures from water forces from a one-hundred year coastal storm. Structures located seaward of the CCCL are expected to be impacted by the high winds and storm surge which accompany storms and therefore must be designed and built to withstand those forces.

3. Funding/Incentives Available

Based upon the Economic Impact Statements prepared for the Counties within which control lines have been established, buildings that are designed to withstand the impact of a 100-year storm will reduce owner's risks, reduce their losses, and thereby reduce their annual insurance premiums. Federal flood insurance premiums recognize state coastal

¹⁰ Note: If NFIP regulations governing the permitted site are more restrictive than the CCCL regulations, then the NFIP rules prevail.

construction standards. Thus, having property within the CCCL jurisdiction does not affect an owner's ability to obtain insurance.

4. Potential Mitigation Benefits for the County

The creation of a CCCL is required by statute and provides enhanced protection for the citizens and infrastructure of a county, thereby reducing both the cost of insurance and the economic impact of a disaster.

B. Florida Building Code

The Florida Building Code (FBC) System contained within Part IV of Chapter 553 of the Florida Statutes was developed after Hurricane Andrew to streamline statewide adoption and enforcement of improved hurricane protection standards. The FBC mitigates against hazards in hazard prone areas by integrating special measures such as those for wind born debris regions and flood prone areas. The Code focuses on public safety, increases local enforcement powers, and incorporates State-of-the-art hurricane protection. Local governments now have the authority to be more stringent when justified by local conditions.

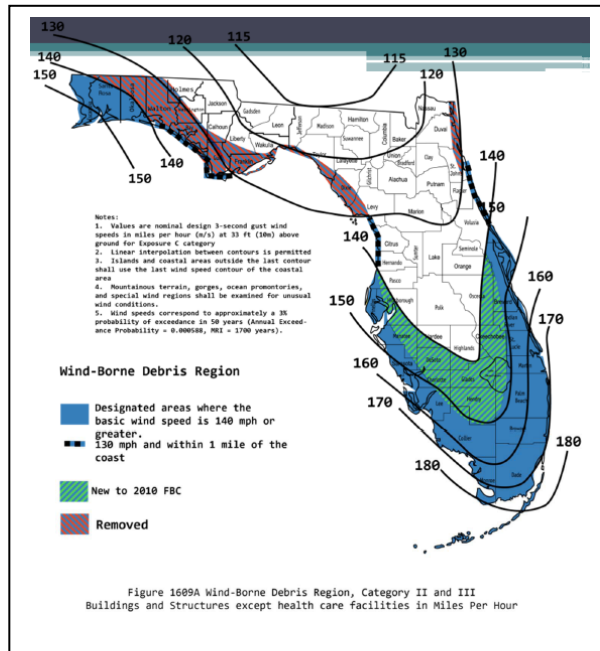
1. Wind Mitigation Requirement

The FBC establishes minimum requirements to protect buildings and their occupants from wind, rain, flood and storm surge based on well-researched and continually-evolving engineering standards for buildings and the products that go into their construction. Hurricanes Charley, Frances, Ivan and Jeanne in 2004 and Dennis, Katrina and Wilma in 2005 demonstrated the overall effectiveness of the Code. Assessments indicated that the design wind speeds required by the Code were adequate and buildings built to the new code did not experience nearly as severe damage as older buildings. While some new building technologies did have weaknesses, the major structural systems failures seen in older buildings were avoided in buildings complying with the Florida Building Code.

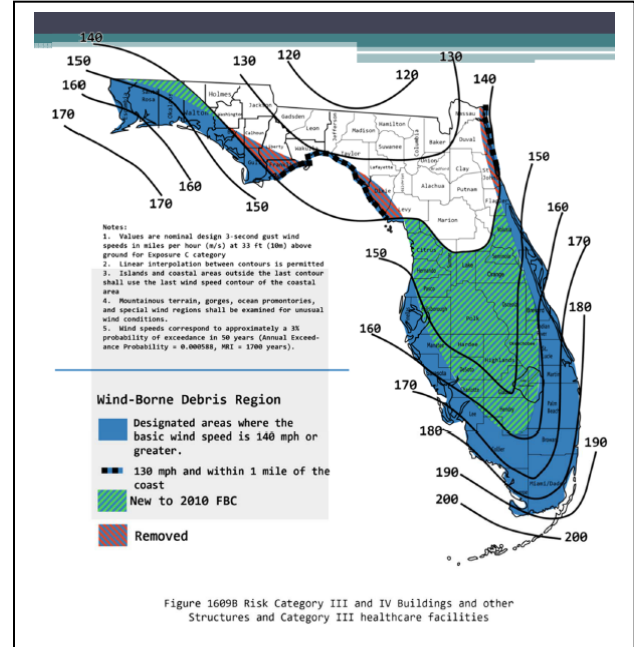
The 2010 FBC changes the “wind borne debris regions” (WBDR) by risk category (I – IV). The WBDR are those hurricane prone regions in Florida within one mile of the coastal mean high water line where the ultimate design wind speed is 130mph or greater. It is also where the ultimate design wind speed is 140 mph or greater. The categories designate building types/occupancy. The following shows the changes made to the 2010 revisions to the FBC.

Wind Borne Debris Regions

Category II-III



Category III-IV



The Florida Building Code is the ultimate mitigation tool. It sets minimum standards for the design and construction of buildings in Florida, and as such, it affects all public and private development in the state.

2. Method of Implementation

Building plans and designs are reviewed by a county pursuant to the FBC and its implementing regulations. No additional action needs to be taken by a county, as the FBC is a matter of state law.

3. Funding/Incentives Available

The Florida Building Code sets standards and does not provide any funding. The incentive of enforcing the FBC has long-term advantages for all concerns in the county. For example, the difference in the building failures experienced during the hurricanes of 2004 and 2005 by structures built to older codes verses those built to the new Florida Building Code was sticking. Many of the older buildings had major wind damages in contrast to structures built to the FBC which had much fewer damages.

4. Potential Mitigation Benefits for the County

The immediate benefits of having the FBC in place include:

- It enhances local government capacity to mitigate hazards
- It encourages the pursuit of mitigation as an ongoing, evolving, research dependent activity
- It prevents unwise expenditures that hinder mitigation efforts, and
- It encourages/requires special siting, setback, and design criteria for construction related activities within high hazard areas.

It is in a County Commission's best interests to ensure that their building, permitting, and inspection program is sound. By ensuring adherence to the continually evolving standards of the Florida Building Code, a county will mitigate the impacts of future wind disasters on human life, private property, and public infrastructure.

VI. Conclusion

This document provides enough information on wind mitigation programs, plans, and provisions in statute to engage every county commissioner and constitutional officer in making attempts to mitigate the devastating impacts of wind related damages in your county. Florida will continue to remain extremely vulnerable to wind hazards such as hurricanes and tornadoes, and all diligence should be taken to provide an extra layer of protection for each county in the State. Participating in, or taking advantage of the provisions explained in this document and accompanying training course will empower elected officials to help offset post-disaster damages, and decrease the amount of time needed for full recovery.

Appendix 1: Wind Mitigation Resources At A Glance

Quick Reference Guide Wind Mitigation Resources

Program Name Reference/Source	Wind Mitigation Requirement	Method of Implementation	Funding/Incentives Available	Potential Mitigation Benefit
State and Federal Mitigation Programs				
Hazard Mitigation Grant Program - (Sec 404)	<ul style="list-style-type: none"> State must be declared in a presidential disaster declaration. Counties in PDD are eligible for Tier I and II funds; non-declared counties are eligible for Tier III funds, if available. Must have an approved Local Mitigation Strategy in order to apply 	<ul style="list-style-type: none"> All applicants (i.e. counties, others) must apply for HMGP funds. County must develop projects consistent with the HMGP guidance. Once awarded, applicant implements the HMGP grant through closeout procedures. 	<ul style="list-style-type: none"> 20% times total of county damages is amount available to fund projects minus certain earmarks. (state initiatives, SMAC, 7% planning projects) Applicant must provide 25% non-federal share of the project costs. 	<ul style="list-style-type: none"> Significant benefit on county's ability to reduce impacts of future disaster damages. Major source of mitigation funding for prioritized LMS projects.
Public Assistance Program – Sec 406 Mitigation	<ul style="list-style-type: none"> County must be included in a presidential disaster declaration. Project is an add-on feature of Public Assistance Project Worksheet 	<ul style="list-style-type: none"> Complete a Hazard Mitigation Proposal for each mitigation enhancement wanted on a project worksheet (PW). State/FEMA must concur project if valid. FEMA approves extra HM costs for the PW. 	<ul style="list-style-type: none"> Project must be cost effective Project is cost shared by FEMA (75%), State (12.5%), and applicant (12.5%) Applicant match can be in-kind services/resources. 	<ul style="list-style-type: none"> Significant benefit on county's ability to reduce impacts of future disaster damages. Potentially available on every project worksheet developed.
Pre-Disaster Mitigation Program [PDM]	<ul style="list-style-type: none"> Designed to minimize risk of hazards to property and people Must have an approved Local Mitigation Strategy in order to apply Eligibility similar to HMGP projects. 	<ul style="list-style-type: none"> State applies as the applicant. Counties provide projects for inclusions to State application. These funds are available annually regardless of declarations. 	<ul style="list-style-type: none"> Applicant must provide full 25% non-federal share. State will not provide matching funds. Match can be leveraged from other funding sources . 	<ul style="list-style-type: none"> Can reduce a county's risk to damages caused by wind. Provides 75% of the funding if county is awarded project funds, which is a significant benefit for the county.
Residential Construction Mitigation Program [RCMP]	<ul style="list-style-type: none"> Must be used for wind mitigation projects that reduce wind risk to eligible applicant. Funds can be used for retrofit or outreach projects 	<ul style="list-style-type: none"> Funds issued once a year, and are on an annual cycle. They must be used by 6/30. Funding is competitive. County can submit up to two applications per cycle, but only one per category. 	<ul style="list-style-type: none"> Project funding limited to maximum grant award that is established annually. Although no match is required, extra scoring points are awarded for those who provide local match. 	<ul style="list-style-type: none"> This grant program allows for projects that educate key officials on wind mitigation, thereby have global benefit. Grant can have an impact on reducing the overall county risk to wind damages.
Community Development Block Grant – Disaster Recovery Assistance [CDBG]	<ul style="list-style-type: none"> Not solely limited to wind mitigation projects, but can be used as a source of funding such efforts. Funds are made available in the CDBG Disaster Funding category, which has certain criteria to follow. 	<ul style="list-style-type: none"> Once CDBG Disaster Funding is available, county applicant must prepare and submit an Action Plan. Action Plan must describe why additional funds are needed, and what unmet need they are meeting. 	<ul style="list-style-type: none"> Funds are made available via reprogramming current county allocations, or via special appropriations to make said funding available for impacted communities. 	<ul style="list-style-type: none"> This program can have a significant impact on reducing the impacts of wind damages for a county. Projects would have to be designated and approved as an unmet need.
State Housing Initiative Partnership [SHIP]	<ul style="list-style-type: none"> Not limited to wind mitigation projects, but can be used as a source of funding such efforts. May be used to secure structures, i.e. mobile homes, from impacts of future windborne debris. 	<ul style="list-style-type: none"> Must be a SHIP member established by local ordinance. Funds are allocated to counties on an annual basis focused toward low income clients. 	<ul style="list-style-type: none"> County SHIP allocations can be diverted to help offset costs of projects meeting a disaster need. This could be in the form of a wind mitigation effort related to affordable housing. 	<ul style="list-style-type: none"> SHIP funds can be used for emergency repairs after a disaster. Such repairs can be to the benefit of the homeowner to mitigate future losses from wind hazards.
Weatherization Assistance Program [WAP]	<ul style="list-style-type: none"> Based on the results of an energy audit, WAP funds can be used by homeowners to weatherize their homes. WAP funds focused toward low income, elderly populations. 	<ul style="list-style-type: none"> WAP funds are allocated to Counties, who in turn provide funds to eligible clients. Every county must have a designated WAP representative to manage the program. 	<ul style="list-style-type: none"> Funding for up to \$5,600 may be spent of an eligible home in a county. Average expenditure is \$2,600. 	<ul style="list-style-type: none"> Eligible homes can be weatherized, to include many allowable activities to prevent future losses from wind. Mitigates the loss to county residents after a disaster.

Program Name Reference/Source	Wind Mitigation Requirement	Method of Implementation	Funding/Incentives Available	Potential Mitigation Benefit
County Plans With Mitigation Components				
Local Mitigation Strategies [LMS]	<ul style="list-style-type: none"> Every county must have an approved LMS in order to be eligible for the Sec 404 HMGP, PA- Sec 406, and PDM programs. LMS is the vehicle to pre-identify eligible projects for mitigation funding, once available. The LMS is a very important county document for this reason. 	<ul style="list-style-type: none"> Once a disaster strikes, and hazard mitigation funds are made available, the LMS serves as a list of pre-identified projects ready for funding for the HMGP, and PDM programs. Without an approved LMS, local applicants cannot take advantage of certain mitigation grant programs. 	<ul style="list-style-type: none"> There are no funds readily available through the LMS, as it is a plan, not a program, but every county must have an approved LMS prior to any mitigation funding being awarded. 	<ul style="list-style-type: none"> The LMS has significant benefit for mitigating future losses through a variety of mitigation measures identified in the LMS. The LMS has municipal and unincorporated county impacts.
Comprehensive Emergency Management Plan [CEMP]	<ul style="list-style-type: none"> Every county must have an approved CEMP that includes a section on the overall county mitigation program and process for management of mitigation grants and funds. This will be changing in 2012. The LMS will become a part of the CEMP, and the current mitigation section eliminated. 	<ul style="list-style-type: none"> Every CEMP is approved by the BOCC and approved by the FDEM on a 4 year update cycle. Every CEMP identifies the method of implementing the county mitigation efforts. 	<ul style="list-style-type: none"> There are no funds associated with the CEMP in terms of mitigation programs. 	<ul style="list-style-type: none"> The CEMP identifies how the county will implement its mitigation programs, and is therefore a very important plan for the County. This will be changing in 2012. The LMS will become a part of the CEMP, and the current mitigation section eliminated.
Comprehensive Plans [COMP]	<ul style="list-style-type: none"> Local COMPs contain the Land Development Regulations which identify building codes with wind load requirements for local construction. 	<ul style="list-style-type: none"> The LDR have specific regulatory prohibitions against inappropriate construction based on wind and storm surge impacts. 	<ul style="list-style-type: none"> There are no funds associated with the COMP in terms of mitigation programs. 	<ul style="list-style-type: none"> Enforcing the COMP, LDR is an excellent measure to ensure wind mitigation is enforced on a large scale.
Post Disaster Redevelopment Plan [PDRP]	<ul style="list-style-type: none"> Although there is no specific requirement for wind mitigation, there are "opportunities" to mitigate wind impacts. Provides pre-disaster tools to implement post-disaster, which can include wind mitigation enhancements. 	<ul style="list-style-type: none"> PDRP is developed and can be adopted into the COMP, CEMP, or exist as a standalone plan. Once adopted by local authorities, it can be implemented in a post-disaster scenario by the governing authorities of the jurisdiction. 	<ul style="list-style-type: none"> The actual development of a PDRP was allowed in previous Homeland Security grants. It may no longer be eligible. Counties have used a variety of funding sources to create their PDRP including NOAA, HMGP, local funds. 	<ul style="list-style-type: none"> Key to a faster, more efficient recovery process for the local jurisdiction. Helps to eliminate the confusion and angst for decision makers in a post disaster scenario. Allows a community to be rebuilt better, faster, and with self determination.
Mitigation Provisions Within State Statutes				
Coastal Construction Control Line [CCCL]	<ul style="list-style-type: none"> Establishes an area of jurisdiction in which special siting and design criteria are applied for construction and related activities. Construction seaward of the CCCL must have FDEP permit. 	<ul style="list-style-type: none"> CCCL represents a zone of special consideration when construction occurs seaward of the line. Special permits are required in order to build seaward of the CCCL. This ensures enforcement of higher regulatory standards. 	<ul style="list-style-type: none"> There are no funds directly associated with the CCCL in terms of mitigation programs. 	<ul style="list-style-type: none"> Fully enforcing the provisions of the construction standards of the CCCL can have a dramatic benefit on reduction of wind and wave related damages from coastal storms. This has the benefit of reducing the overall county vulnerability to wind related damages.
Florida Building Code [FBC]	<ul style="list-style-type: none"> The FBC establishes minimum requirements to protect buildings and occupants from wind, etc. 2010 FBC revises the Wind-Borne Debris regions for all categories of structures and occupancies. 	<ul style="list-style-type: none"> The FBC is adopted by the BOCC and enforced by the County. 	<ul style="list-style-type: none"> The FBC sets standards and does not provide any funding. The incentive of enforcing the FBC has long-term advantages for all concerns in the count by reducing overall future damages to wind related events. 	<ul style="list-style-type: none"> The Florida Building Code is the ultimate mitigation tool. It sets minimum standards for the design and construction of buildings in Florida, and as such, it affects all public and private development in the state.



Leadership Forum

A County Commissioners' and Constitutional Officers' Guide to Wind Mitigation Programs and Applications



Course Agenda

- Welcome
- Introduction of Course Participants
- Review of Course Outline and Expectations
- Why Is This Course Important
- Hazard Risk and Vulnerability Analysis
- Historical Impacts From Three Hurricanes
- Review of Wind Mitigation Opportunities
 - County Plans with Mitigation Components
 - Federal/State Wind Mitigation Programs
 - Provisions in State Statutes
- Mitigation Success Stories
- Conclusion and Wrap Up
- Course Evaluation



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Course Outline/Topics Covered

- Why is this course important?
- Hazard risk and vulnerability analysis.
- Historical impacts from wind hazards.
- List of plans, programs and provisions in statute where wind mitigation components are present.
- How to take advantage of wind mitigation programs in your county.

Course Outline/Topics Covered

- How to take full advantage of wind mitigation programs in your county (cont..)
 - What are the wind mitigation requirements?
 - What is the method of implementing the plans, programs and/or provisions in statutes?
 - What, if any, are the incentives? Is funding available?
 - What is the potential wind mitigation benefit for a county?
- Mitigation Success Stories
- Course Conclusion

Course Objectives

- To make participants aware of wind mitigation plans, programs, and provision in statute for your county.
- To understand wind hazards, and the potential for impacting your county.
- To learn how to take advantage of, and implement appropriate wind mitigation opportunities provided in the plans, programs and provisions in statute.
- To determine the levels of funding available for each program, and how to apply for the funds.
- To understand the potential wind mitigation benefits for my county.

Why Is This Course Important?

What if you were faced with this as a Commissioner or Constitutional Officer?



- Hundreds (or thousands, depending on county size) of displaced residents, some for extended periods of time.
- This shows Homestead mobile home park after Hurricane Andrew. 500 displaced residents.
- This is one of **many** destroyed communities.

Why Is This Course Important?

What if you were faced with this as a Commissioner or Constitutional Officer?



- Widespread **infrastructure damages**
- (Hurricane Ivan - wind driven storm surge impacts)



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Why Is This Course Important?

What if you were faced with this as a Commissioner or Constitutional Officer?



**Major disruption to
businesses and the economic
engine of your county!**

(Hurricane Wilma, Ivan, Charlie damages to
businesses)



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Why Is This Course Important?

What if you were faced with this as a Commissioner or Constitutional Officer?



- In Andrew, 25% of the severely damaged businesses never reopened.
- Hurricane Wilma resulted in 98% of all businesses without power, some for 20 days!
- Hurricane Ivan severely damaged Pensacola City Hall requiring COOP implementation for 2 years while major repairs were made.



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Why Is This Course Important?

What if you could reduce the amount of wind related damage in your county?



- Reduce the impact on **public** and **private infrastructure**;
 - Reduce the impact on **residents**;
 - Reduce the number of disrupted **businesses**;
 - Reduce the overall risk and vulnerability of your county to future wind related disasters?
-would you be interested?



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Why Is This Course Important?

- **Remember**, initially all disasters are “local”!
- Florida’s 377 County Commissioners are charged by Chapter 252.38(3)(a)1 to:
 - *“...appropriate and expend funds; make contracts; obtain and distribute equipment, materials, and supplies for emergency management purposes; provide for the health and safety of persons and property, including emergency assistance to the victims of any emergency; and direct and coordinate the development of emergency management plans and programs in accordance with the policies and plans set by the federal and state emergency management agencies.”*



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Why Is This Course Important?

- Wind related damages can cripple a county’s economy and residents for extended periods of time.
 - Recovery period can take up to 10 years or longer.
- Property damages can cause a county’s tax base to temporarily decline.
- Mitigating even a small percentage of wind related damages from hazards can have a huge benefit for a county.



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Why Is This Course Important?

- Commissioners and Constitutional Officials have the unique ability to impact every business and individual in a county by participating in the mitigation programs currently available.
- The actions taken by you can ensure a very large return on your investment of time and energy.
- FEMA claims that for every **\$1** spent on mitigation, communities save on average **\$3-\$4** in repairs and replacement costs after a disaster.*

* Source: National Institute of Building Sciences, Multihazard Mitigation Council, 2005, "[Natural Hazard Mitigation Saves](#)", Vol 1, page iii.



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Why Is This Course Important?

- Disasters make **heroes** or **villains** out of elected officials.
- Responsive leadership produces confidence in the electorate.
- Taken seriously, this course can provide the mechanisms to provide such leadership.
- It will also help you **NOT** to leave available wind mitigation funds on the table...unused!!



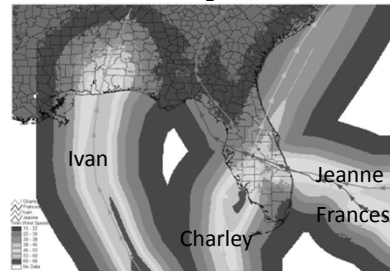
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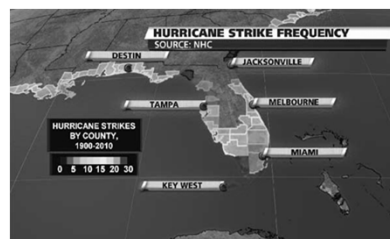
Risk and Vulnerability

Risk and Vulnerability

- No county in Florida is immune to wind impacts.
- **100%** of Florida's 67 counties will have wind related damages over the next 50 years, or sooner.
- Hurricanes, tornadoes, winter storms, cold fronts can all produce wind damages.
- Hurricanes normally produce the highest countywide damages.



Peak 1min Hurricane Winds over Florida, 2004



Risk and Vulnerability

How likely is Florida to be impacted by a tropical storm of any size?

You decide!



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Risk and Vulnerability



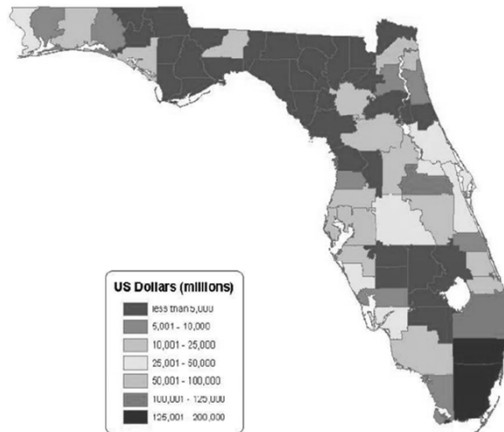
All Tropical Systems 1850 - 2008 (NOAA)
(www.csc.noaa.gov/hurricanes/#)



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Risk and Vulnerability



- Commercial Buildings losses from hurricane induced wind damages
- Represents statewide total of \$1.3 trillion.
- Majority of uses include retail trade and general services.

Source: FDEM Hurricane Loss Mitigation Study for Commercial Risks in Florida, 2009
(<http://www.floridadisaster.org/mitigation/pubs.htm>.)

Risk and Vulnerability

- In 2010, 80% (15,041,048) of Florida's total population (18,801,310) reside within 10 miles of the coast. (Source: FDEP)
- 95% of all Floridians live within 35 miles of the shoreline, making millions of residents highly vulnerable, and at risk of wind related damages from hurricanes.
- According to VISIT FLORIDA, 85.9M visitors came to Florida in 2011, a 4.4% increase from 2010.
- All of this represents a significant number of people, infrastructure and residential structures vulnerable to wind impacts.

Historical Impacts

Historical Impacts

- Hurricane Andrew (1992) was a Cat 5 hurricane.
- Wind related damages were extensive.
- Made landfall in Miami-Dade County and exited in Collier County.



Historical Impacts

- Andrew made landfall at 5am, and exited the State around 9am....a little more than a **4 hour** event.
- Yet the damages caused by Andrew crippled much of South Florida for many months.
- Although coastal damages were also impacted by the storm surge, the majority of damages were **wind** related.

Historical Impacts

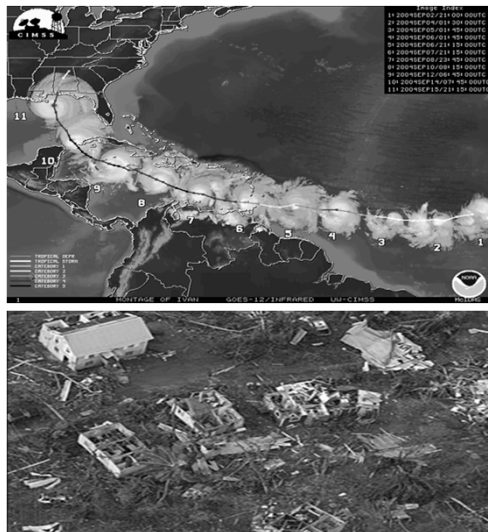
- Consider the following impacts from Andrew:
 - 28,066 homes destroyed
 - 107,380 homes damaged
 - 180,000 persons left homeless
 - 82,000 businesses destroyed or damaged
 - 120,000 jobs temporarily or permanently lost
 - 32,900 acres of farmland damaged
 - 31 public schools destroyed or severely damaged
 - 59 health care facilities and hospitals damaged
 - 9,500 traffic signals and signs destroyed
 - 1.4 M residents loss power for extended periods of time
 - 80,000 residents lost telephone service
 - \$41+ B in damages (today's dollars)

Historical Impacts

- Although Andrew had water impacts from storm surge and inland flooding, the vast majority of the damages incurred were wind related!
- What if a percentage of these damages could have been mitigated? What impact would that have had on Monroe, Miami-Dade, Broward, Collier, and Palm Beach County?

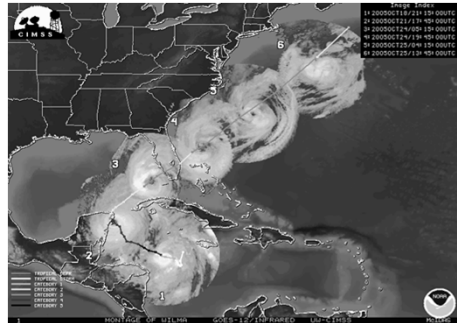
Historical Impacts

- **Hurricane Ivan (2004)** had similar types of damages.
 - Impacted Bay to Escambia Counties and inland to Alabama line.
 - \$14B in damages
 - 14 fatalities
 - 135,800 residents with home damages.
 - 56 public shelters hosted over 28,900 residents.
 - Large scale evacuations were ordered



Historical Impacts

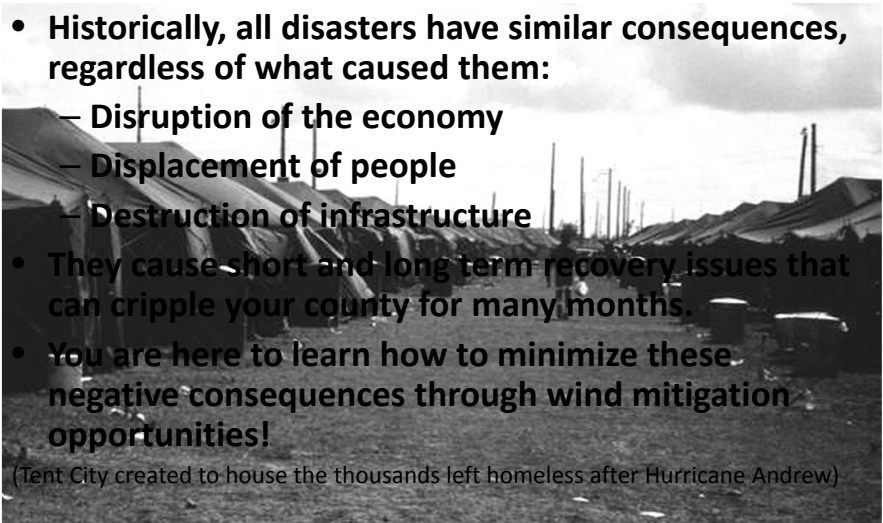
- **Hurricane Wilma(2005)** was primarily a **“wind”** event.
 - Entered the State as a Cat 3 storm, exited as a Cat 2 storm
 - \$19B in damages in Florida. \$29B storm wide
 - Was basically a 4 county event, yet 3rd most costly hurricane in history.
 - 6,000,000+ Floridians lost power for extended periods of time.
 - 6 deaths in Florida



Historical Impacts

- **Historically, all disasters have similar consequences, regardless of what caused them:**
 - **Disruption of the economy**
 - **Displacement of people**
 - **Destruction of infrastructure**
- **They cause short and long term recovery issues that can cripple your county for many months.**
- **You are here to learn how to minimize these negative consequences through wind mitigation opportunities!**

(Tent City created to house the thousands left homeless after Hurricane Andrew)



Wind Mitigation Opportunities

What Is Wind Mitigation?



Wind Mitigation Opportunities Examples

- Increase wind resistance of window assemblies on public facilities.
- Increase wind resistance of roof structures.
- Increase public/government stakeholders awareness of wind mitigation provision of the Florida Building Code.
- Construction of safe rooms to protect against hurricane/tornado winds.
- Increase regulatory standards for construction in wind-hazard areas.
- Retrofitting homes using recommended mitigation techniques to make them more wind resistant.
- Ensure mobile homes are anchored securely to resist wind damages.
- Increasing integration of wind mitigation into comprehensive planning and mitigation strategies.
- Retrofit shelters to improve relative safety and reduce the emergency shelter space deficit.
- Early warning systems to reduce loss of life from associated wind events.
- Conduct vulnerability assessments of structures, and recommend mitigation options to reduce wind related damages.



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Wind Mitigation Opportunities Examples - Shutters



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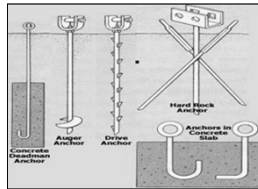
Wind Mitigation Opportunities Examples - Window Glazing



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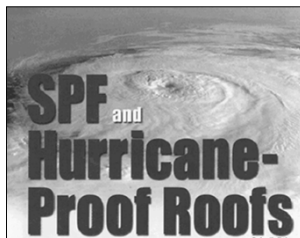
Wind Mitigation Opportunities Examples - Tie Downs



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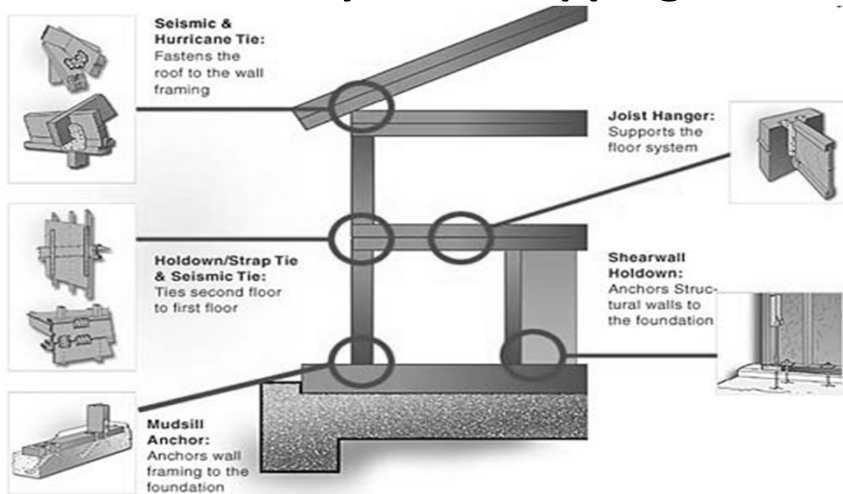
Wind Mitigation Opportunities Examples - Enhanced Roofing



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Wind Mitigation Opportunities Examples - Strapping



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Wind Mitigation Opportunities

- **County Plans with Wind Mitigation Components**
 - Local Mitigation Strategies
 - Comprehensive Emergency Management Plans
 - Comprehensive Plans - LDRs
 - Post Disaster Redevelopment Plan
- **State and Federal Mitigation Programs**
 - Community Development Block Grants
 - Hazard Mitigation Grant Program
 - Public Assistance Program - Sec 406 Migration
 - Residential Construction Mitigation Program
 - State Housing Initiative Partnership - Disaster Funding
 - Weatherization Assistance Program
- **Mitigation Provisions within State Statutes**
 - Coastal Construction Control Line
 - Florida Building Code



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Wind Mitigation Opportunities

- **Appendix 1** of the Handout Materials has all plans, programs, and provisions in statute summarized for quick reference.

Appendix 1
Wind Mitigation Resources At a Glance

Program Name Reference/Source	Wind Mitigation Requirement	Method of Implementation	Funding/Incentives Available	Potential Mitigation Impact
State and Federal Mitigation Programs				
Hazard Mitigation Grant Program - (Sec 404)	<ul style="list-style-type: none"> State must be declared in a presidential disaster declaration. Countries in POD are eligible for Tier I and II funds; non-declared counties are eligible for Tier III funds, if available. Must have an approved Local Mitigation Strategy in order to apply. 	<ul style="list-style-type: none"> All applicants (i.e. counties, others) must apply for HMGP funds. County must develop projects consistent with the HMGP guidance. Once awarded, applicant implements the HMGP grant through closeout procedures. 	<ul style="list-style-type: none"> 20% times total of county damages is amount available to fund projects minus certain earmarks, (state initiatives, S/MAC, 7% planning projects) Applicant must provide 25% non-federal share of the project costs. 	<ul style="list-style-type: none"> Significant benefit on county's ability to reduce impacts of future disaster damages.
Public Assistance Program - Sec 406 Mitigation	<ul style="list-style-type: none"> County must be included in a presidential disaster declaration. Project is an add-on feature of Public Assistance Project Worksheet 	<ul style="list-style-type: none"> Complete a Hazard Mitigation Proposal for each mitigation enhancement wanted on a project worksheet (PW). State/FEMA must concur project if valid. FEMA approves extra HM costs for the PW. State applies as the applicant. Counties provide projects for inclusions to State application. These funds are available annually regardless of declarations. 	<ul style="list-style-type: none"> Project must be cost effective Project is cost shared by FEMA (75%), State (12.5%), and applicant (12.5%) Applicant match can be in-kind services/resources. Applicant must provide full 25% non-federal share. State will not provide matching funds. 	<ul style="list-style-type: none"> Significant benefit on county's ability to reduce impacts of future disaster damages. Potentially available on every project worksheet developed.
Pre-Disaster Mitigation Program [PDM]	<ul style="list-style-type: none"> Designed to minimize risk of hazards to property and people Must have an approved Local Mitigation Strategy in order to apply 	<ul style="list-style-type: none"> Funds issued once a year, and are on an annual cycle. They must be used by 6/30. Funding is competitive. County can submit up to two applications per cycle, but only 	<ul style="list-style-type: none"> Project funding limited to maximum grant award that is established annually. Although no match is required, extra 	<ul style="list-style-type: none"> Can reduce a county's risk to damages caused by winds. Provides 75% of the funding if county is awarded project funds, which is a significant benefit for the county.
Residential Construction Mitigation Program (RCMP)	<ul style="list-style-type: none"> Must be used for wind mitigation projects that reduce wind risk to eligible applicant. Funds can be used for retrofit or 	<ul style="list-style-type: none"> Funds issued once a year, and are on an annual cycle. They must be used by 6/30. Funding is competitive. County can submit up to two applications per cycle, but only 	<ul style="list-style-type: none"> Project funding limited to maximum grant award that is established annually. Although no match is required, extra 	<ul style="list-style-type: none"> This grant program allows for projects that educate key officials on wind mitigation, thereby have global benefit. Grant can have an impact on reducing the



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County Plans with Mitigation Components

County Plans with Mitigation Components Local Mitigation Strategies

- **Wind Mitigation Requirements**
 - Every county is required to have an approved LMS or forfeit certain federal program funding.
 - LMS must identify viable mitigation strategies and projects the County has identified.
 - Must be updated once every five years
- **Method of Implementation**
 - Strategies and projects are to be implemented as soon as possible.
 - County Commission decides which projects to fund based on the disaster event, or the priority established through the LMS.



Washington County
Local Mitigation Strategy
January 2011



Prepared by:
Washington County Board of County Commissioners
Local Mitigation Strategy Committee

County Plans with Mitigation Components

Local Mitigation Strategies

- **Funding/Incentives Available**
 - LMS must be current and approved by FDEM and FEMA in order to be eligible for mitigation funds.
 - Funding available via the HMGP is to be used to implement the LMS projects post-disaster.
- **Potential Mitigation Benefit for the County**
 - LMS acts as the official county blueprint for mitigation.
 - Local citizens are encouraged to participate in the LMS planning process to ensure county wide applicability.



County Plans with Mitigation Components

Comprehensive Emergency Management Plan

- **Wind Mitigation Requirements**
 - Every county is required by Ch 252, FS to have an approved CEMP.
 - Each CEMP is to have a mitigation section that describes how the county implements mitigation.
- **Method of Implementation**
 - County Commission through the County Emergency Management Agency
 - Must be updated every four years.

Holmes County



Comprehensive Emergency
Management Plan



Holmes County Board of County Commissioners
Holmes County Emergency Management
October, 2010



County Plans with Mitigation Components

Comprehensive Emergency Management Plan

- **Funding/Incentives Available**
 - No funding is available, but CEMP ensures key staff who are responsible for plan development and implementation are identified.
- **Potential Mitigation Benefit for the County**
 - Identifies how the county will implement the various mitigation measures.
 - Has ramifications for county mitigation efforts.



County Plans with Mitigation Components

Comprehensive Plans/Land Development Regulations

- **Wind Mitigation Requirements**
 - Most mitigation requirements occur in the Coastal Element of the COMP
 - Opportunities for enhanced wind mitigation provisions can occur in the Coastal Element.
- **Method of Implementation**
 - BOCC via the Planning Department (Zoning, Code Enforcement, etc) implement the COMP and wind mitigation components therein.



County Plans with Mitigation Components Comprehensive Plans/Land Development Regulations

- **Funding/Incentives Available**
 - No funding is available, but COMP is the logical mechanism to reduce future wind related losses.
- **Potential Mitigation Benefit for the County**
 - The COMP has significant impact on everyone in the County, especially in coastal counties that have Coastal Elements.
 - The COMP is a mechanism at the disposal of the BOCC to enhance wind mitigation provisions for the benefit of all residents, especially those living near the coastline.



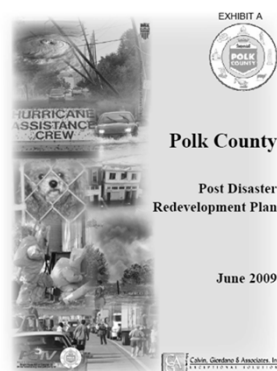
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County Plans with Mitigation Components Post Disaster Redevelopment Plan

- **Wind Mitigation Requirements**

Although there is no specific requirement to mitigate future wind related damages, the PDRP process can accommodate a local community's desire to enhance post-disaster rebuilding by, for example, rebuilding to current wind related codes or code plus, or another wind related project it want to accomplish.
- **Method of Implementation**
 - Adopted in COMP, or CEMP, or stand alone Plan.
 - BOCC will active the PRDP



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County Plans with Mitigation Components Post Disaster Redevelopment Plan

- **Funding/Incentives Available**
 - FDEM has developed a comprehensive list of all funding sources for PDRP and other mitigation grants.
 - Contact Matt.Peterson@deo.myflorida.com
- **Potential Mitigation Benefit on the County**
 - Faster, more efficient recovery process
 - Eliminate the need to overly react to event
 - Allows for self determination in the recovery phase.



State and Federal Mitigation Programs

State and Federal Mitigation Programs

Hazard Mitigation Grant Program - Sec 404 (HMGP)

- **Wind Mitigation Requirements**
 - HMGP funding is a function of the State being included in a Presidential Disaster Declaration.
 - HMGP is made available to every declared county first, then to non-declared counties pending fund availability.
 - Projects are pre-identified in the LMS, or added to the LMS at the time of the disaster via the LMS Committee.
- **Method of Implementation**
 - County receives announcement of available HMGP funding levels.
 - BOCC ultimately determines what projects to fund from the LMS.
 - Projects are submitted to the State for review. State submits project to FEMA for approval.
 - Must meet federal HMGP requirements.



*Commissioners'/Constitutional Officers' Guide to
Wind Mitigation Programs and Applications*



State and Federal Mitigation Programs

Hazard Mitigation Grant Program - Sec 404 (HMGP)

- **Funding/Incentives Available**
 - In Florida, each county is eligible for an amount of funding equivalent to all eligible county disaster recovery costs x 20%.
 - FEMA will provide 75% of funding. County must provide the matching 25% non-federal share. Match can be in-kind.
- **Potential Mitigation Benefit for the County**
 - HMGP is one of the most important mitigation programs available to a county.
 - It can be used for all aspects of wind mitigation.
 - It is an excellent way to get a mitigation project funded by the BOCC for 25% of the cost.



*Commissioners'/Constitutional Officers' Guide to
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State and Federal Mitigation Programs

Public Assistance Program - Sec 406

- **Wind Mitigation Requirements**

- Allows for replacement or repair of damaged public infrastructure to prevent/reduce future, similar damages from recurring.
- Mitigation measure must be cost effective



- **Method of Implementation**

- Extra mitigation measure written into an existing Public Assistance project through the Project Worksheet.
- FEMA must approve of extra costs. Must be cost effective, technically feasible, compliant with regulatory requirements.
- *Examples:* enhanced window protection; code-plus roofing; roof to foundation bracing for wind resistance, etc.



State and Federal Mitigation Programs

Public Assistance Program - Sec 406

- **Funding/Incentives Available**

- No limits, as long as it is cost effective, and reasonable.
- Funding is discretionary on part of FEMA who will balance the interests in disaster resistance with the proper stewardship of public funds.

- **Potential Mitigation Benefit for the County**

- This can have huge impacts for any county. It brings in mitigation enhancements under the PA program which is matched at 75/12.5/12.5%.
- It is critically important the county is fully aware of this provision in the law, and have staff trained in its implementation.



State and Federal Mitigation Programs

Pre-Disaster Mitigation Program

- **Wind Mitigation Requirements**
 - Competitive program available pre-disaster.
 - Similar in scope to the HMGP in terms of program requirements
- **Method of Implementation**
 - FDEM is the applicant. County submits grant proposal for inclusion in FDEM's submission to FEMA.
 - State submittal is in competition with other states.
 - *Examples:* relocation of structures; acquisition of real property; construction of safe rooms; protective measures for utilities; etc.



Commissioners'/Constitutional Officers' Guide to
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State and Federal Mitigation Programs

Pre-Disaster Mitigation Program

- **Funding/Incentives Available**
 - Up to \$3M (federal share) per project sub-application (County)
 - Federal share is 75%, County share is 25%.
 - Must have an approved LMS to be eligible for funding.
- **Potential Mitigation Benefit for the County**
 - A mechanism to fund projects identified in the County LMS.
 - Depending on the project, can have substantial mitigation benefit for the county.



Commissioners'/Constitutional Officers' Guide to
Wind Mitigation Programs and Applications



State and Federal Mitigation Programs

Hurricane Loss Mitigation Program

Residential Construction Mitigation Program (RCMP)

- **Wind Mitigation Requirements**

- Proposed projects must either retrofit existing buildings or provide public outreach for wind mitigation.
- Retrofits must use the Florida Building Code as the standard for all retrofitting activities.



- **Method of Implementation**

- RCMP grants are issued on an annual cycle. A county can submit up to two applications (one in each category)



Commissioners'/Constitutional Officers' Guide to
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State and Federal Mitigation Programs

Residential Construction Mitigation Program (RCMP)

- **Funding/Incentives Available**

- Up to \$150,000 (may change annually) per awarded grant/ up to two grants per applicant (different categories). Approximately \$3.5M appropriated annually.
- No match requirements, but those with demonstrated match score higher in competition.

- **Potential Mitigation Benefit for the County**

- Has potential to either retrofit buildings or educate many residents about wind mitigation and the Florida Building Code.



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State and Federal Mitigation Programs Residential Construction Mitigation Program (RCMP)

Example from recent RCMP funding cycle:

- Individual grants up to \$150,000 each were awarded to the following for wind retrofit and outreach programs: **City of Cocoa, City of Melbourne, Rebuild Northwest Florida, Bay County, Town of Davie, City of Tamarac, Hardee County, Community Action Program Committee, St. Lucie County, Town of Century, Florida Home Builders, Florida's Foundation, Florida PACE Funding Agency, Florida Association of Counties.**
- Projects utilized annual State Housing Initiatives Partnership program (SHIP), Hazard Mitigation Grant Program (HMGP), Home Investment Partnerships (HOME) and/or Community Development Block Grant (CDBG) allocations to **leverage RCMP funds**. A total of \$793,366 was spent on mitigation upgrades for approximately 104 residences.

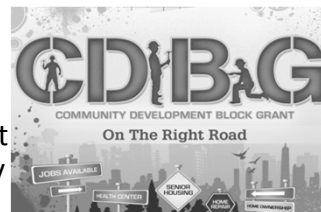


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State and Federal Mitigation Programs Community Development Block Grant (CDBG) - Unmet Needs Disaster Recovery Assistance

- **Wind Mitigation Requirements**
 - Funds only available if in a Presidential Disaster Declaration.
 - County must demonstrate significant **unmet recovery needs**, and capacity to carry out initiative, if funded.
- **Method of Implementation**
 - HUD notifies eligible government that funds are available. County then develops an Action Plan, and submits it for funding consideration.



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State and Federal Mitigation Programs Community Development Block Grant (CDBG) - Disaster Recovery Assistance

- **Funding/Incentives Available**
 - Funding is dependant on the amount of supplemental funding HUD receives from Congress for the disaster at hand.
 - The amount of funding is driven by a formula used by HUD based on the need, and amount allocated by Congress to meet the unmet needs.
- **Potential Mitigation Benefit for the County**
 - This program can be used for wind mitigation projects, if the county submits an Action Plan with such a proposal in it.
 - It could have countywide impacts, if the application is designed to meet that type of need.

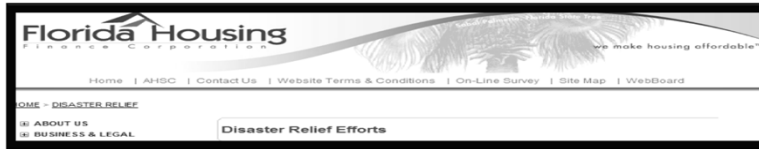


State and Federal Mitigation Programs State Housing Initiative Partnership (SHIP)

- **Wind Mitigation Requirements**
 - SHIP can be used to fund emergency repairs, rehabilitation, match federal dollars for housing grants/programs, manufactured housing installation enhancements.
- **Method of Implementation**
 - Section 420.9078(8), F.S. provides for the distribution of appropriated SHIP funds from the Local Government Housing Trust Fund among counties and eligible municipalities for which an emergency or natural disaster has been declared by executive order and which have an approved local housing assistance plan to implement a local housing assistance strategy consistent with Section 420.907-9079, F.S.



State and Federal Mitigation Programs State Housing Initiative Partnership (SHIP)



- **Funding/Incentives Available**
 - Under an emergency rule, the unencumbered county funds can be diverted to other disaster-related purposes.
 - Unencumbered statewide SHIP funds can be diverted to the disaster area as well. Amount depends on the unencumbered amount.
- **Potential Mitigation Benefit for the County**
 - Used creatively, SHIP funds can be used for wind mitigation projects that impact substandard housing in a county by bring structures up to current code.



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State and Federal Mitigation Programs Weatherization Assistance Program (WAP)

- **Wind Mitigation Requirements**
 - WAP funds are available to low income residents who qualify to weatherize their homes.
- **Method of Implementation**
 - Funds go directly from USDOE to the State, and given to an entity within each County to manage based on need and ability to expend the funds.
 - Individuals apply for the WAP funds to assist in weatherizing their homes through the county representative agency.



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State and Federal Mitigation Programs Weatherization Assistance Program (WAP)

- **Funding/Incentives Available**
 - Up to \$5,600 can be granted to a homeowner, but the average grant is \$2,600.
 - Funds can be used for specific purposes established by the State WAP (Florida Department of Economic Opportunity)
- **Potential Mitigation Benefit for the County**
 - WAP funding can be used to assist in replacement of doors, windows, repairs to roofs, ceilings, some of which can reduce the impacts of damaging winds on a home.



State and Federal Mitigation Programs Program Funding

Here is an example of the funding available for the mitigation programs:

- **RCMP** - \$3.5 M annual appropriation
- **PDM** - \$40 M for FFY 12 (nationally, but Florida consistently receives their "fair share!")
- **WAP** - \$175 M between FFY 09-12 for Florida
- **HMGP** - \$451.8 M for 2004-05 hurricanes
- **406 PA Mitigation** - \$117.19M for 2004-05 hurricanes
- **CDBG, SHIP, HOME** - all used as funding for local match in 04-05 hurricanes, and more recent events.



State and Federal Mitigation Programs Program Funding

406 Mitigation for 2004-05 Hurricane Declarations					
Year	Disaster	DR	Total PA PWs	Total PWs w/406	Total 406 Added (\$M)
2004	Charley	1539	9,908	615	\$6.60
	Frances	1545	12,694	591	\$10.30
	Ivan	1551	5,514	780	\$14.20
	Jeanne	1561	8,597	220	\$8.50
2005	Dennis	1595	3,786	315	\$22.00
	Katrina	1602	3,208	107	\$0.49
	Wilma	1609	32,412	2,913	\$55.10
TOTAL			76,119	5,541	\$117.19

State and Federal Mitigation Programs Program Funding

HMGP for 2004-05 Hurricane Declarations			
Year	Disaster	DR	Total HMGP (\$M)
2004	Charley	1539	74.1
	Frances	1545	83.60
	Ivan	1551	74.10
	Jeanne	1561	69.90
2005	Dennis	1595	12.00
	Katrina	1602	7.80
	Wilma	1609	130.30
TOTAL			451.80

State and Federal Mitigation Programs Program Funding

- Example of Various Funding Sources Used to Leverage a recent HMGP Project in Lee County:
 - **Project:** Mitigate chronic flooding in Ft. Myers along Estero Boulevard
 - **Funding Sources:**
 - HMGP - \$1.2M
 - SFWMD - \$20K
 - City Utility Fund - \$20K
 - Road Impact Fees - \$81K
 - Gas Taxes - \$81K
 - Total - \$3.2M



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State and Federal Mitigation Programs Program Funding

Tropical Storm Fay HMGP Distribution

COUNTY	FEDERAL ALLOCATION	25% NON-FEDERAL MATCH			
Alachua	\$ 105,929.84	\$ 35,309.95	Jefferson	\$ 62,500.65	\$ 20,833.55
Baker	\$ 10,132.50	\$ 3,377.50	Lake	\$ 75,263.20	\$ 25,087.73
Bradford	\$ 46,441.00	\$ 15,480.33	Lee	\$ 271,850.78	\$ 90,616.93
Brevard	\$ 1,628,639.22	\$ 542,879.74	Leon	\$ 2,136,136.94	\$ 712,045.65
Calhoun	\$ 103,522.60	\$ 34,507.53	Liberty	\$ 44,984.76	\$ 14,994.92
Charlotte	\$ 100,967.62	\$ 33,655.87	Manatee	\$ 120,235.47	\$ 40,078.49
Clay	\$ 49,650.16	\$ 16,550.05	Marion	\$ 10,896.45	\$ 3,632.15
Collier	\$ 909,618.18	\$ 303,206.06	Martin	\$ 161,175.75	\$ 53,725.25
Dixie	\$ 28,094.11	\$ 9,364.70	Monroe	\$ 202,500.21	\$ 67,500.07
Duval	\$ 990,787.42	\$ 330,262.47	Nassau	\$ 193,359.03	\$ 64,453.01
Flagler	\$ 174,369.80	\$ 58,123.27	Okeechobee	\$ 134,190.83	\$ 44,730.28
Gadsden	\$ 63,198.29	\$ 21,066.10	Osceola	\$ 48,537.81	\$ 16,179.27
Glades	\$ 7,290.86	\$ 2,430.29	Palm Beach	\$ 1,013,911.57	\$ 337,970.52
Gulf	\$ 7,462.17	\$ 2,487.39	Putnam	\$ 240,218.91	\$ 80,072.97
Hamilton	\$ 15,744.84	\$ 5,248.28	Sarasota	\$ 394,286.88	\$ 131,428.96
Hardee	\$ 126,844.74	\$ 42,281.58	Seminole	\$ 295,906.07	\$ 98,635.36
Hendry	\$ 69,731.90	\$ 23,243.97	St. Johns	\$ 280,477.95	\$ 86,825.98
Highlands	\$ 41,510.34	\$ 13,836.78	St. Lucie	\$ 1,373,127.04	\$ 457,709.01
			Suwannee	\$ 27,638.80	\$ 9,212.93
			Taylor	\$ 2,535.52	\$ 845.17
			Union	\$ 11,389.79	\$ 3,796.60
			Volusia	\$ 1,678,332.49	\$ 559,444.16
			Wakulla	\$ 101,859.48	\$ 33,953.16
			TOTAL	\$ 13,341,252.00	\$ 4,447,084.00



*Commissioners'/Constitutional Officers' Guide to
Wind Mitigation Programs and Applications*



State and Federal Mitigation Programs Program Funding - HMGP Distribution

FEMA-1806-DR-FL Hurricane Gustav ALLOCATIONS		
COUNTY	FEDERAL ALLOCATIONS	25% NON-FEDERAL MATCH
Bay	\$476,612	\$158,871
Escambia	\$1,435,672	\$478,557
Franklin	\$105,614	\$35,205
Gulf	\$639,624	\$213,208
Okaloosa	\$291,136	\$97,045
Santa Rosa	\$123,460	\$41,153
Walton	\$15,125	\$5,042
Total	\$3,087,243*	\$1,029,081*

FEMA-1840-DR-FL
Severe Weather and Floods
3-Month Estimate

COUNTY	FEDERAL ALLOCATION	25% NON-FEDERAL MATCH
Baker	\$ 32,794.40	\$ 10,931.47
Clay	\$ 48,003.62	\$ 16,001.22
Flagler	\$ 359,779.56	\$ 119,926.58
Putnam	\$ 397,966.35	\$ 132,655.52
Volusia	\$ 1,126,809.06	\$ 375,603.21
TOTAL	\$ 1,965,353.00	\$ 655,118.00

FEMA-1831-DR-FL
Severe Weather and Floods
3-Month Estimate

COUNTY	FEDERAL ALLOCATION	25% NON-FEDERAL MATCH
Bay	\$ 73,767.58	\$ 24,589.20
Calhoun	\$ 599,663.52	\$ 199,887.89
Dixie	\$ 15,494.59	\$ 5,164.86
Escambia	\$ 112,748.34	\$ 37,582.79
Franklin	\$ 19,195.31	\$ 6,398.44
Gadsden	\$ 29,138.48	\$ 9,712.83
Gilchrist	\$ 13,592.51	\$ 4,530.84
Gulf	\$ 77,810.11	\$ 25,936.71
Hamilton	\$ 94,447.33	\$ 31,482.45
Holmes	\$ 342,034.76	\$ 114,011.62
Jackson	\$ 66,835.77	\$ 22,278.60
Jefferson	\$ 17,002.05	\$ 5,667.35
Lafayette	\$ 39,056.25	\$ 13,018.75
Leon	\$ 103,477.64	\$ 34,492.56
Liberty	\$ 326,294.96	\$ 108,765.01
Madison	\$ 443,046.56	\$ 147,682.22
Okaloosa	\$ 543,896.21	\$ 181,298.78
Santa Rosa	\$ 141,855.01	\$ 47,285.02
Suwannee	\$ 43,308.94	\$ 14,436.32
Wakulla	\$ 8,455.98	\$ 2,818.66
Walton	\$ 668,232.22	\$ 222,744.13
Washington	\$ 150,413.89	\$ 50,137.98
TOTAL	\$ 3,929,768.00	\$ 1,309,923.00



Commissioners'/Constitutional Officers' Guide to
Wind Mitigation Programs and Applications



State and Federal Mitigation Programs Program Funding

Is Your County Getting It's Fair Share?



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State and Federal Mitigation Programs Program Funding

Current Program Points of Contact

<http://www.floridadisaster.org/Mitigation/index.htm>



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Mitigation Provisions in State Statute

Mitigation Provisions In State Statutes Coastal Construction Control Line (CCCL)

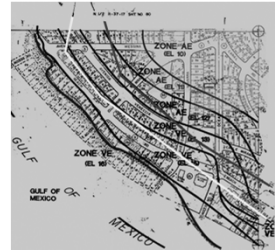
- **Wind Mitigation Requirements**

- CCCL is designated area where special siting and design criteria are applied to construction and related activities
- Such standards can be more stringent than those already applied to the rest of the coastal building zone.



- **Method of Implementation**

- CCCL regulatory standard are overseen by the County.
- Permits required from FDEP also.



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Mitigation Provisions In State Statutes Coastal Construction Control Line (CCCL)

- **Funding/Incentives Available**

- No funding is available for enforcing the CCCL
- Incentive is higher building standard will mean less overall wind related damages to the County

- **Potential Mitigation Benefit for the County**

- Fully enforced, the CCCL provides enhanced protection for residents and infrastructure from wind related damages.



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Mitigation Provisions In State Statutes Florida Building Code (FBC)

- **Wind Mitigation Requirements**
 - FBC sets the minimum standards for design and construction
 - County governments can adopt and enforce higher standards
- **Method of Implementation**
 - County reviews all plans for construction pursuant to the FBC or adopted higher standards.

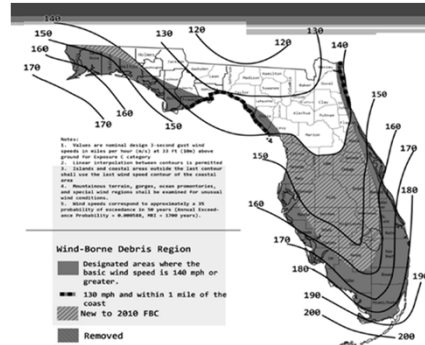


Figure 1609B Risk Category III and IV Buildings and other Structures and Category III healthcare facilities



Mitigation Provisions In State Statutes Florida Building Code (FBC)

- **Funding/Incentives Available**
 - No funding is associated with the enforcement of the FBC.
 - Incentives: In 2004-05 hurricanes, homes built to FBC received much less damages than those built before the enactment of the FBC.
- **Potential Mitigation Benefit for the County**
 - It enhances local government capacity to mitigate hazards;
 - It encourages the pursuit of mitigation as an ongoing, evolving, research dependent activity;
 - It prevents unwise expenditures that hinder mitigation efforts, and
 - It encourages/requires special siting, setback, and design criteria for construction related activities within high hazard areas.



Mitigation Success Stories

Mitigation Success Stories

- The Delray Beach Old School Square is a Cultural Art Center at the National Historic Site serving a large community in the area.
- The scope of work for this mitigation project was to provide protection to the Old School Square by installing impact resistant glass on three structures. The components used for this wind retrofit met The Florida Building Code Specifications.
- This project was completed in 2011.



Mitigation Success Stories

TAMPA GENERAL HOSPITAL

- The scope of work for this project was to provide protection for Tampa General Hospital by installing hurricane shutters on all windows, upgrade existing louvers, doors and roof.
- Wind protection was provided on any other openings such as skylights, vents and exhaust fans. All installations were done in strict compliance with the Florida Building Code or Miami Dade specifications.
- The project was completed in 2011.



Commissioners'/Constitutional Officers' Guide to
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Mitigation Success Stories

TAMPA GENERAL HOSPITAL

- Tampa General is a private not-profit hospital and one of the most comprehensive medical facilities in West Central Florida serving a dozen counties with a population in excess of 4 million.
- As one of the largest hospitals in Florida, Tampa General is licensed for 1,018 beds, and with approximately 6,900 employees, is one of the region's largest employers.



Commissioners'/Constitutional Officers' Guide to
Wind Mitigation Programs and Applications



Conclusion

- Every county in Florida is susceptible to wind related damages.
- Mitigating their impacts ensures a quicker recovery for the county and its residents.
- Participating in, or taking advantage of the provisions provided in the course can empower elected officials to take decisive action to reduce future damages.

Conclusion

Next Steps

- **Prior to Next Event**
 - Be engaged with the LMS process.
 - Ensure you have projects listed on the Project List in the LMS reflective of the hazards the County is susceptible to.
 - Contact you LMS Chairperson and schedule a meeting to review LMS process.
 - Ensure you or someone on your staff is fully versed in the mitigation programs; how they work; funding availability; project eligibility criteria; etc.

Conclusion

Next Steps

- **After Next Event**
 - Be represented the post-event LMS Committee Meetings. Funding levels, priorities, projects, etc. will be discussed at that time.
 - Be prepared to discuss the merits of any project you have submitted on the Project List.
 - Identify the source for the non-federal match requirement.



Commissioners'/Constitutional Officers' Guide to
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Conclusion

- For additional information on wind related mitigation, go to:
www.floridadisaster.org/Mitigation/index.htm
- Or contact:



Miles E. Anderson, Chief
Bureau of Mitigation/FDEM
(850) 413-9816
Miles.Anderson@em.myflorida.com



Eric Poole, Ast. Legislative Director
Florida Association of Counties
(850) 294-9405
epoole@fl-counties.com



Commissioners'/Constitutional Officers' Guide to
Wind Mitigation Programs and Applications



Course Evaluation

- Please assist us in improving this course though your evaluation comments.
- Complete the quick evaluation and turn it in prior to your departure today.

THANK YOU

“A County Commissioners’ /Constitutional Officers’ Guide to Wind Mitigation Programs and Applications”

Course Evaluation

In order to assist the Florida Association of Counties improve upon this course, we need your evaluation. Please complete the form and submit it before departing. If needed, the course will be revised based on your comments.

Evaluation Score:

- 1 – Strongly agree.** Course met all my expectations.
- 2 – Agree.** Course met most of my expectations.
- 3 – Neutral**
- 4 – Disagree.** Course did not meet all of my expectations
- 5 – Strongly disagree.** Course did not meet any of my expectations

Expectations	Agree → Disagree	1	2	3	4	5
The Course - Overview						
My overall understanding about wind mitigation plans, programs, and provisions in statutes has increased.						
<i>Suggestion for Improvement:</i>						
The <i>objectives</i> established in the beginning of the course were met.						
<i>Suggestion for Improvement:</i>						
I have a better understanding of what the wind mitigation requirements are for the plans, programs and provisions in statutes discussed in this course.						
<i>Suggestion for Improvement:</i>						
I understand how to take advantage of the wind mitigation measures presented in this course for the benefit of my county.						
<i>Suggestion for Improvement:</i>						
For the programs that have funding associated with them, I understand how to apply for the funds, and what to expect if funding is received.						
<i>Suggestion for Improvement:</i>						
The benefits of implementing the wind mitigation plans, programs, and provisions in statute were adequately explained to me.						
<i>Suggestion for Improvement:</i>						
Based on the information provided, I plan to ensure my county’s wind mitigation						

Expectations		Agree → Disagree	1	2	3	4	5
opportunities are maximized.							
<i>Suggestion for Improvement:</i>							
The Course Presenters							
The presenters were knowledgeable about the subject matter they discussed.							
<i>Suggestion for Improvement:</i>							
The Presenters allowed time for questions and answers.							
<i>Suggestion for Improvement:</i>							
The Presenters kept my interest high.							
<i>Suggestion for Improvement:</i>							
The Course Materials							
The summary document on the plans, programs, and provisions in statute helped me better understanding the course materials.							
<i>Suggestion for Improvement:</i>							
The PowerPoint slides were informative, and clearly summarized the key issues of each subject.							
<i>Suggestion for Improvement:</i>							
Overall Rating							
I would recommend this course to other commissioners and/or constitutional officers and their key staff.							
<i>Suggestion for Improvement:</i>							
I would like to suggest the following improvements be made to this course:							
<i>Suggestion for Improvement:</i>							
General Comments							