



Florida SHMPoints

Providing insightful mitigation news and information from around the State of Florida.

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FEMA Approves 2013 Enhanced State Hazard Mitigation Plan

By: Laura Herbert

The 2013 State of Florida Enhanced Hazard Mitigation Plan (SHMP) that was submitted to the Federal Emergency Management Agency (FEMA) in February 2013 received approval from both FEMA Region IV and Headquarters. All required and optional elements for the standard and enhanced crosswalks were found to be sufficiently met.



On Monday, April 15, 2013, a conference call with representatives from FEMA and FDEM's Bureau of Mitigation took place to discuss the plan review where it was stated that, "All of the FEMA Reviewers were impressed with the readability, or-

ganization, and flow of the Enhanced SHMP. All of the findings, including the ones from FEMA's Headquarters, were complimentary of how well Florida had documented and updated their State Plan since the last one, which was submitted in 2010." FEMA representatives also commented that they hope to use this plan as a national model for other states updating their own hazard mitigation plans.

The 2013 Enhanced SHMP will become effective on August 24, 2013, upon expiration of the 2010 plan. Both the 2010 and 2013 plans can be found on FDEM's mitigation website at www.floridadisaster.org/mitigation/state. The Mitigation Planning Unit would like to thank the SHMP Advisory Team members for their contributions to the plan. Accomplishing this colossal feat would not have been possible without all of your dedication, time, and expertise. Through all of our mitigation efforts we can make Florida a safer place to live.

Integrating Climate Change into State Hazard Mitigation Plan

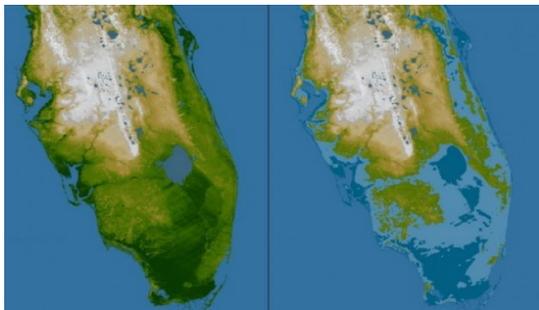
By: Lindsay Stevens

Over the next six months, a research team consisting of professors Robert Deyle and William Butler and senior planner Lindsay Stevens, from Florida State University's Department of Urban and Regional Planning, will undertake a research project to anticipate the likely effects of climate change and accelerated sea level rise on the hazards faced by the state of Florida, and propose amendments to the State Hazard Mitigation Plan (SHMP) reflective of the identified impacts. This project is part of a larger body of work focused on improving community resiliency within Florida as it relates to climate change and sea level rise led by the Florida Department of Economic Opportunity, in partnership with the Florida Division of Emergency Management, and supported by the Florida Department of Environmental Protection, as the lead agency for the Florida Coastal Management Program.

This project will identify and review the best available information and data on climate change and accelerated sea level rise projections as they relate to Florida and determine the likely effects on hazards that Florida is particularly vulnerable to, including: flooding (coastal and inland/riverine), tropical cyclones, wildfires, severe storms, and extreme heat. The FSU research team will propose amendments to the hazard profiles in the risk assessment section of the SHMP to incorporate the likely effects of climate change. Concurrently, they will interview key contacts in local, state, regional, and non-government agencies to obtain input on how to best integrate climate change and accelerated sea level rise into state and local mitigation plans. The FSU research team believes that

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this collaborative approach may assist in identifying gaps or barriers to integrating climate change and accelerated sea level rise into existing mitigation programs, and may also result in the identification of additional programs and resources that could provide support to state and local mitigation planning efforts. After interviewing key stakeholders, the FSU research team will also develop proposed amendments to the state's hazard mitigation goals and objectives contained in the SHMP.

The FSU research team anticipates presenting proposed SHMP amendments to a project advisory committee, comprised of members of the SHMP Advisory Team (SHMPAT) and the Community Resiliency Focus Group, in early 2013. The project advisory committee will have the opportunity to provide feedback on the proposed amendments and input on the project. After incorporating feedback, the FSU research team will submit the proposed SHMP amendments to the DEM for consideration by the full SHMPAT.

This project will enrich Florida's approach to identifying, profiling and planning for hazards by incorporating the best available information on climate change and accelerated sea level rise into the SHMP. Ultimately, through this project and other related efforts, the State of Florida will continue its tradition of leading the hazard mitigation planning field by anticipating the impacts of climate change and accelerated sea level rise. For additional information, please contact Dr. Robert Deyle (rdeyle@fsu.edu), Dr. William Butler (wbutler@fsu.edu), or Lindsay Stevens (lstevens@fsu.edu).

New Open Sourcing Mitigation Website

By: Trenise Lyons

MitigationMovement.org is a free, open source website intended to accelerate and support disaster mitigation activity across the U.S. With more than 900 organization profiles on the site this new disaster safety platform is designed to help members of the mitigation movement in their efforts to strengthen homes and safeguard families from disasters of all kinds.

MitigationMovement.org is more than a website. It's an open source community of public, private, and nonprofit members of the disaster mitigation movement designed to facilitate collaboration and cooperation. When you participate and share your ideas and resources, you will help open source and accelerate disaster mitigation for communities worldwide.

There are several features to the website, which include:

1. **Open Source:** Upload educational campaigns, academic research, technical resources, long-term recovery information, and anything else your organization has to offer to the mitigation movement. In-turn, download and share this vast library of resources with your partners, social media followers, local mitigation professionals or use them for your organizations presentations and everyday activity.

2. **Discussion Forum:** The MitigationMovement.org discussion forum is a place for mitigation leaders and organizations to bring their ideas to the table. Whether it is mitigation tech-



niques or ideas for future education campaigns, the forum is your whiteboard for all mitigation discussions. You can vote discussions up or down, to make them more visible depending on their relevancy on the website.

3. **Disaster Exchange:** The disaster exchange allows organizations to post the supplies they need and have in stock ready to be delivered to the appropriate destination. This virtual exchange reduces the long-term recovery by providing the item, location, and contact information to exchange supplies.

4. **Event Calendar:** View all major conferences, forums, summits, meetings and more in a list or calendar view. Add your own events to promote attendance.

5. **Additional Features:** Search functions allow you to find resources and organizations based on multiple factors. Also, organization profiles allow easy access to your organizations information including social media channels.

MitigationMovement.org is proctored by the Federal Alliance for Safe Homes (FLASH). Our mission is to promote life safety, property protection and resiliency by empowering the community with knowledge and resources for strengthening homes and safeguarding families from natural and man-made disasters. MitigationMovement.org is free of charge and always will be.

Hurricane Isaac HMGP Application Development Workshops

By: Amy Miller

FDEM will conduct Application Development Workshops for the Hazard Mitigation Grant Program (HMGP) on April 19 and May 2, 2013 in Escambia and Palm Beach Counties, respectively. The purpose of the workshops is for Division staff to provide detailed information about the application process and to assist in the completion of a draft application.

The HMGP is a federal program, which funds projects that implement long-term hazard mitigation measures following a major disaster declaration. Eligible projects include (but are not limited to) drainage system upgrades, structural elevation, flood proofing, property acquisition, and structure relocation. HMGP projects reduce communities' losses from future disasters. Post-disaster projects that simply repair and reconstruct

damaged properties to pre-disaster conditions are not eligible because they do not mitigate the property from future hazards. Eligible applicants include government entities, private non-profit organizations, and Indian tribes as described at www.floridadisaster.org/mitigation/hazard/applicant_eligibility.htm.

Division staff will be present at the application workshops to respond to questions and concerns. Topics to be covered include program eligibility requirements, eligible activities, application preparation, scope-of-work development, environmental issues, and submission of accurate data for the state's benefit-cost analysis. Detailed information about the program is available at www.floridadisaster.org/mitigation/hazard. All are invited to attend.

Date	Time	Location
Friday April 19, 2013	8:30 am – 12:30 pm	Escambia County Central Office Complex Room 104 (Main Conference Room) 3363 West Park Place Pensacola, FL 32505
Thursday May 2, 2013	8:30 am – 12:30 pm	Palm Beach County Emergency Operations Center Operations Room 20 South Military Trail West Palm Beach, FL 33415

Mitigation Costs versus Benefits

By: Alison Kearns

In 2005, a study by the National Institute of Building Sciences reported that, on average, every dollar spent on mitigation yields four dollars in future benefits. Before the time, effort, and resources are put into a mitigation action however, it must be shown that the project would indeed help the people or property involved. To determine the effectiveness of a proposed mitigation project, an analysis of the costs and benefits must be performed.

A benefit cost review is a planning level assessment of whether the mitigation action's benefits outweigh the cost. The costs addressed do not have to be exact numbers and values, but can be based on experience and judgment. Benefits are typically shown in monetary values from losses avoided, but other qualitative factors can be addressed such as quality of life, natural functions of ecosystems, etc. This planning level assessment is useful for determining how mitigation actions should be evaluated or prioritized.

A more in depth analysis of the costs and benefits of a mitigation action can be performed using FEMA's Benefit Cost Analysis (BCA) Tool. In September 2012, FEMA released the BCA Tool Version 4.8 for use in demonstrating cost effectiveness, which follows the FEMA-approved methodologies required for Hazard Mitigation Assistance grant applications. The BCA tool makes it easier for users and evaluators to conduct and review these analyses to determine the cost effectiveness of proposed mitigation projects. The program consists of guidelines, methodologies, and software modules for a range of natural hazards and mitigation actions including floods, hurricane winds, earthquakes, wildfires, tornado safe rooms, and damage frequency assessments.

Trainings and technical assistance for the BCA tool and are offered online or through resident or mobile classes with FEMA's Emergency Management Institute. More information on the BCA Tool is on FEMA's webpage at www.fema.gov/benefit-cost-analysis.

Hazard Profile: Tornadoes

By: Alison Kearns

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud. A tornado's wind speed normally ranges from 40 to 300 mph. Unlike hurricanes, which produce wind speeds of similar values over relatively widespread areas, the maximum winds in tornadoes are often confined to extremely small areas and vary tremendously over very short distances, even within the funnel itself.

The Enhanced Fujita Tornado Scale, (or the "EF Scale"), is the definitive scale for estimating wind speeds within tornadoes based upon the damage done to buildings and structures. The EF Scale, revised in 2007, is used extensively by the National Weather Service in investigating tornadoes and by engineers in correlating damage to buildings and techniques with different wind speeds caused by tornadoes.

EF SCALE (U.S.)	
EF0	• 65–85 mph (105–137 km/h)
EF1	• 86–110 mph (138–178 km/h)
EF2	• 111–135 mph (179–218 km/h)
EF3	• 136–165 mph (219–266 km/h)
EF4	• 166–200 mph (267–322 km/h)
EF5	• over 200 mph (over 322 km/h)

Tornadoes develop under three scenarios: (1) along a squall line ahead of an advancing cold front moving from the north; (2) in connection with thunderstorm during hot, humid weather; and (3) in the outer portion of a tropical cyclone. Because the temperature contrast between air masses is generally less pronounced in the state, tornadoes are typically less severe in Florida than in other parts of the country. Florida has two tornado seasons, during the spring and summer seasons.

The deadly spring season, from February through April, is characterized by more powerful tornadoes because of the presence of the jet stream. When the jet stream digs south into Florida and is accompanied by a strong cold front and a strong squall line of thunderstorms, the jet stream's high-level winds of 100 to 200 mph often strengthen a thunderstorm into what meteorologists call a "supercell" or "mesocyclone." These powerful storms can move at speeds of 30 to 50 mph, produce dangerous downburst winds, large hail, and are usually the most deadly tornadoes. Spring season tornadoes are sometimes very destructive and they account for a disproportional large share of the tornado fatalities in Florida.

Since 1950, Florida has had four particularly severe tornado events during the spring season. In April of 1958, an F4 tornado (prior to Enhanced Fujita scale) moved through Polk

County and causing upwards of \$50,000 in damages. On February 2, 1998, two tornadoes (F1 and F2) moved across South Florida causing over \$205 million in damages. To date this is the costliest tornado occurrence in Florida's history. Another significant spring event occurred several weeks later, from February 22-23, 1998 when seven tornadoes (F1 to F3) moved through Central Florida killing 42 people and injuring 260. This is the deadliest tornado event in Florida's history. Lastly, on February 2, 2007, three tornadoes (EF1 to EF3), known as the Groundhog Day Event, moved through Central Florida. These tornadoes killed 21 people and caused \$114 million in damage, making it the second deadliest tornado event in Florida's history. Spring season tornadoes are typically responsible for more deaths and damage compared to summer season tornadoes.



Florida's summer tornado season runs from June until September and has the highest frequencies of storm generation, with usual intensities of EF0 or EF1 on the Enhanced Fujita Scale. These tornadoes typically are associated with thunderstorms during hot, humid weather and land-falling tropical cyclones. The most common and usually the least destructive tornadoes in Florida occur during the summer season.

One exceptional case of summer season tornadoes was from September 15-18, 2004 when Hurricane Ivan made landfall in the Panhandle and moved northeast towards the Atlantic. Over 119 tornadoes were reported over the affected states, from Florida to Pennsylvania, the most ever recorded from one hurricane event. Although there were many tornadoes, a majority of them were weak, intensities measuring from EF0 to EF2. Only one of the 119 tornadoes was an EF3. However, this hurricane with its included tornadoes was responsible for seven fatalities and damages just under \$100 million.

Warning systems exist for tornadoes and are constantly improving. Tornado watches and warnings are used to warn citizens of a possible imminent threat and information is broadcasted via NOAA's Weather Radio, sirens, and other media outlets. The safest way to mitigate the effects of a tornado in Florida is to seek shelter in a storm ready safe room or the innermost room of a home on the lowest level.

Success Story: A Tale of Two Homes

Provided by: FLASH®

The Federal Alliance for Safe Homes (FLASH®) launched the latest in its successful educational *Tale of Two Homes* video series: *A Tale of Two Homes - Tornado*. The video tells the remarkable story of the Harrison family of Athens, AL, who survived an EF-4 tornado that completely destroyed their home and most others in their neighborhood. The Harrison's and their two children emerged unscathed from their tornado safe room shortly after the tornado passed. As a result, they have chosen to share their story of survival to further spread the message - safe rooms save lives.



A properly built safe room not only protects families from high-wind events, it also creates a multi-use space in the home that adds to its value. According to Leslie Chapman-Henderson, tornado safe rooms increase the sale price of a home by 3.5 percent or an average of \$4,200. "Anyone who installs a tornado safe room in their home is able to recoup almost all of their investment when they sell," says Leslie Chapman-Henderson. "The price of a safe room can start around \$3,500 to \$4,000 depending on its size and built-in amenities. A \$5,000 tornado safe room will provide an 84 percent return on investment," she adds.

Kevin and Sarabeth Harrison are convinced that they and their two young children are alive today thanks to the safe room they consciously decided to build into the corner of their garage. Made of reinforced concrete block, the family took refuge as a tornado devastated their neighborhood and surrounding areas killing 250 people in its path. The Harrisons are still shocked to recall how 30 seconds of roaring winds forever altered the lives and landscape of their community. "The tornado ran right on top of us," Kevin Harrison said.

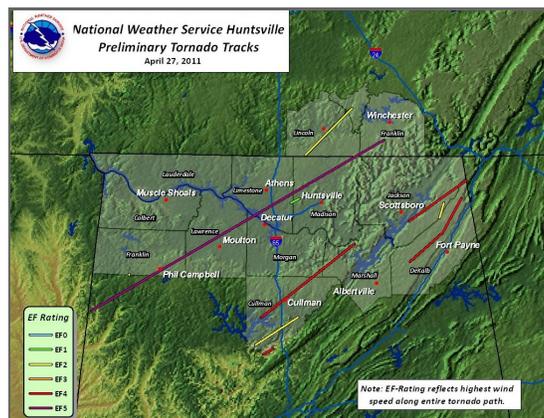
Visit www.flash.org to see the video "A Tale of Two Homes - Tornado" as well as other successfully mitigation stories around the nation. In addition to the new video, FLASH offers useful tips and consumer information on how to protect your home and your family from tornadoes and other natural and manmade disasters, available on FLASH's website.

Federal Alliance for Safe Homes (FLASH)®, a 501(c)3 non-profit organization, is the country's leading consumer advocate for strengthening homes and safeguarding families from natural and manmade disasters.

"Tornado safe rooms save lives. The Harrison family's experience is a perfect example," says Leslie Chapman Henderson, President and CEO of FLASH. "Their decision to take their safety into their own hands and build a safe room undoubtedly protected them from serious injury and possible death when the tornado hit Athens on April 27, 2011. Their willingness to share their story to encourage other families to build safe rooms makes them true heroes of the disaster safety movement."

FLASH collaborates with more than 100 innovative and diverse partners that share its vision of making America a more disaster-resistant nation including: BASF: The Chemical Company, Federal Emergency Management Agency, Florida Division of Emergency Management, The Home Depot®, International Code Council®, Kohler Power Systems, National Weather Service, RenaissanceRe, Simpson Strong-Tie®, State Farm®, USAA® and WeatherPredict Consulting Inc.

A safe room can provide ultimate life safety protection from the dangerous forces of severe winds and tornadoes. Homeowners can build or retrofit the interior spaces of their homes to safe-room standards or choose to purchase pre-fabricated safe rooms designed to withstand tornado-force winds. Closets, bathrooms, laundry rooms and outdoor rooms like garden sheds and pool houses can be enhanced to serve as safe rooms.



In 2008, FLASH opened the interactive weather experience StormStruck: A Tale of Two Homes® in Lake Buena Vista, FL. Learn more about FLASH and gain access to its free consumer resources by visiting www.flash.org or calling (877) 221-SAFE (7233). Also, get timely safety tips to ensure that you and your family are always well protected from natural and manmade disasters by subscribing to the FLASH blog-Protect Your Home in a FLASH.

Want to know more about an article? Contact us!

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The Bureau of Mitigation

Mitigation is an integral part of the Division of Emergency Management. Mitigation actions reduce or eliminate the loss of life and property by lessening the impact of disasters. Due to Florida's weather, geography, and miles of coastline the state is highly vulnerable to disasters. Disasters can be very costly to citizens and government.

The Bureau of Mitigation administers several federal mitigation grant programs including the Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, Flood Mitigation Assistance Program, Severe Repetitive Loss Program and the Repetitive Flood Claims Program. The Bureau also administers the Residential Construction Mitigation Program, a state mitigation grant program.

If you would like to know more please visit:

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



Residents of Camden Court near McCulley Mill Road in Limestone County, east of Athens, Alabama, leave humorous messages painted on the remains of their homes Tuesday, May 3, 2011.

There is a correction for the January 2013 SHMPPoints Newsletter. In the article, "National Flood Mitigation Fund", it was stated that the federal share requirement is up to 10% for severe repetitive loss structures while it is actually up to 100%. For any structures with 4 or more claims of over \$5,000 or 2 or more claims exceeding the value of the structure, up to 100% will be covered by the federal share requirement. For further questions, please contact the State Floodplain Manager.