

I. INTRODUCTION

Hazards are unpreventable natural events that by their nature, may expose the population to the risk of injury or death and may damage or destroy private property, public infrastructure, and agricultural or other resources. Florida, with its large and rapidly growing population centers located in coastal areas, emphasizes the need for all levels of coordination and preparation.

Over three-quarters of Florida's population lives in coastal counties and approximately 33 percent live within a category five storm tide inundation zone. Florida has 1,350 miles of general coastline, and 118,436 miles of tidal shoreline, which includes the outer coast, offshore islands, sounds, bays, rivers and creeks. The population in coastal counties is a mixture of those who have experienced, first hand, the threat of coastal storms and those who have no experience in preparation and evacuation in case of such weather. Furthermore, because of the large concentrated population in these areas it is important to monitor both natural and man-made coastal threats and hazards as well as the level of preparation being conducted by government and citizens to increase the level of safety to the population at risk.

Historically, Florida residents have dealt with a number of severe weather conditions related to hurricanes. Between 1900 and 2009, Florida was impacted by 63 hurricanes, 30 of which were major hurricanes (Category 3 or higher). In 1985, a series of storms (Elena, Juan, and Kate) jolted the Panhandle, resulting in death, damage to coastal structures, destruction of numerous sea walls, and damage to coastal highways. In August 1992, Hurricane Andrew made landfall in south Dade County. The hurricane was classified as a category 4 storm with sustained wind speeds of 145 miles per hour. The hurricane produced approximately 7 inches of rain and a maximum storm tide of 16.9 feet. A total of 60,000 homes were destroyed and a quarter of a million people were left homeless in Dade County.

Hurricane Andrew cost an estimated \$30 billion in insured and uninsured losses, devastating the environment, entire communities, and the insurance industry. Many families were left homeless and many insurers were left bankrupt. The aftermath of Hurricane Andrew has brought issues of hazard mitigation and preparation, populations at risk along Florida's coast, and personal responsibility to the forefront.

In 1994, two tropical storms (Alberto and Beryl) caused 100-year flooding events in the state's Panhandle. The flooding was so extreme that Presidential declarations of "emergency" and "disaster" were made. Finally, Hurricane Opal in October 1995 hit Florida with Category 4 storm surges that resulted in \$3 billion worth of damage. Levy County locals are also aware of the unnamed storm events, resulting in disaster declarations in 1993, 1998, 2000 and 2003 due to flood damage from rainfall events. Florida again experienced notable hurricane season weather in 2004, as a series of three storms in quick succession hit the State. During 2004, Levy County was impacted by tropical storm conditions yet, due to its flood vulnerability, suffered significant damage as the result of Hurricanes Charley, Francis and Jeanne. Fortunately, Levy County was spared during 2005 which was the most active hurricane season on record. More recently Levy County was included in presidential disaster declarations for Tropical Storms Alberto (2006) and Fay (2008).

Florida is very susceptible to storm-induced flooding. The average elevation throughout the state is approximately 100 feet above mean sea level (msl). The flooding created by hurricanes is a threat to the life and property of coastal residents. The most critical threat is to those residents within the category 1

hurricane evacuation zone developed by the National Hurricane Center. This zone shows all areas that would be inundated with water from a land falling category 1 hurricane, defined as having sustained winds of 74 to 95 miles per hour. The category 1 hurricane evacuation zone generally includes all of Florida's barrier islands, even those with areas of elevation above the category 1 level. The Coastal High Hazard Area is defined as the category 1 hurricane evacuation zone but as it is designated by the most recent regional evacuation study. The Coastal High Hazard Area is used by the Florida Department of Community Affairs (DCA) to review land use issues as part of the Comprehensive Planning process.

As previously stated, populations within the category 1 hurricane evacuation zone face a greater risk than those outside of this zone due to their immediate vulnerability to low intensity hurricanes. The population at risk includes residential property owners, tourists and visitors who may be using facilities in the coastal area, and the general population residing in mobile homes.

The size of the population in coastal high hazard areas is a good indicator of a potential risk to human health. Additionally, the insured value of property in coastal hazard areas is also an indicator of risk to property. Recent hurricane events demonstrate that insured losses can be significant and create a tremendous burden for homeowners, private insurers, and local, state, and federal governments. As insured value of property in coastal hazard areas rises, the state is faced with increasing responsibility for the fiscal impacts caused by natural disasters. Florida has numerous mobile homes in the coastal areas, all of which are extremely susceptible to the effects of hurricane force winds and thus their location and installation need to be regulated.

The cost of post-disaster recovery has grown at such an alarming rate throughout the United States that the issue of hazard mitigation has gained attention from all levels of government. The Federal Emergency Management Agency (FEMA) has developed a National Mitigation Strategy and the state of Florida has created a Statewide Mitigation Strategy. These strategies view planning for disasters as the way to ensure a safer community and reduce recovery costs. Additional funding is becoming available to support hazard mitigation efforts. This funding will provide mitigation planning opportunities for local governments that have been affected by a disaster or are vulnerable to disasters.

What is Hazard Mitigation?

Hazard mitigation is any action taken to permanently reduce or eliminate long-term risk to people and their property from the effects of hazards. Tools of hazard mitigation include land use planning techniques that limit the infrastructure in high hazard areas and programs for retrofitting existing structures to meet new building codes and standards. Ideally, a community can minimize the effects of future hazards through a mix of code enforcement, planning, and responsible development. The result of incorporating mitigation into development practices will be the creation of safer and more economically resilient communities.

The Hazard Mitigation Strategy

The Local Mitigation Strategy is a plan that a community can develop to promote hazard mitigation and to manage post-disaster recovery. Developing these strategies in Florida is important because the state is vulnerable to many hazards as discussed previously. Florida is subject both to riverine flooding and coastal flooding. One indication of how vulnerable our communities are to flooding is the high number of National Flood Insurance policies statewide. Florida leads the nation in the number of flood insurance policies - with more than 40 percent of the total number of policies written.

Local governments may use this Strategy as an index to record where criteria items are addressed in existing plans, ordinances, or policies. The Local Mitigation Strategy criteria are based on existing planning requirements, and additional information has been included to further direct the County's mitigation choices and allow the County and its communities to rebuild better after a disaster.

The Local Mitigation Strategy belongs to the community - as government agencies work together, coordinating within and between various city and the county agencies, private sector interests, concerned residents and nonprofit organizations - the community is taking an important step toward becoming more disaster resistant.

Benefits of a Local Mitigation Strategy

Local governments will benefit from preparing a Local Mitigation Strategy in a number of very important ways.

- ***More Funding***

By identifying problems and possible solutions and mitigation activities in advance of a disaster, local governments will be in a better position to obtain post-disaster funding. Local governments will have the chance to initiate changes in their communities that can permanently reduce the risk of future losses--an opportunity that is often lost in the rush to rebuild after a disaster to pre-disaster conditions. By identifying and prioritizing projects prior to a disaster, the local government will gather the kind of information that is typically required on applications for post-disaster funding. Since these local governments will have collected and analyzed that information during "blue skies," they will be able to quickly submit applications for disaster funds should they be impacted by an event.

- ***Faster Recovery***

Through planning and implementation of their local mitigation strategies as well as coordinating among all levels of government, communities will be able to reduce their vulnerability to disasters and identify opportunities for post-disaster mitigation. As a result, communities will be able to recover faster. To provide long-term disaster protection for their communities and to complement the national and state mitigation strategies, it is helpful that local governments have their own mitigation strategies. A Local Mitigation Strategy will reflect the concerns unique to a particular community and will help that community identify mitigation opportunities before the community is impacted by a disaster.

- ***Planning Compliance***

Communities will meet comprehensive planning and other planning requirements and achieve community goals. The mitigation Strategy serves as a bridge between the local government comprehensive growth management plan, the county comprehensive emergency management plan, land development regulations, building codes, and relevant ordinances such as floodplain management and coastal management ordinances. The Strategy integrates mitigation initiatives established through various policies, programs, and regulations into a single document.

The Strategy was developed as a separate working document that compiles hazard mitigation planning, projects and programs from a range of existing sources such as the local comprehensive land use plan, the comprehensive emergency management plan, and other related codes and ordinances. From this point, mitigation initiatives can be identified and prioritized, allowing a community to address mitigation in a manageable way. In the Levy County Local Mitigation Strategy, the various policies, programs and ordinances have been analyzed and included in the *Community Guiding Principles* chapter of this document. A list of mitigation programs and projects included in *Hazard Mitigation Projects and Initiatives* chapter will help local governments more effectively access available funding - both post-disaster and on an ongoing basis.

As a planning tool, local governments, including planners, emergency managers, building officials, public safety directors, public works directors, as well as elected and appointed officials, are encouraged to use this Strategy to develop a comprehensive hazard Mitigation Strategy.