

Appendix B: Countywide Mitigation Initiatives

Appendix B provides a description of representative mitigation programs and initiatives undertaken by Palm Beach County and its jurisdictions and the principles guiding intergovernmental coordination. These programs and initiatives served as the basis for the mitigation projects outlined in Appendix E. This appendix includes:

- Section B-1 Mitigation Initiatives of Palm Beach County; and
- Section B-2 Jurisdictional Initiatives within Palm Beach County, and
- Section B-3 Intergovernmental Coordination
- Section B-4 Private Sector Coordination

This section addresses the following FEMA requirements:

Requirement §201.6(c)(3)(i): The hazard mitigation strategy *shall* include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

Requirement §201.6(c)(3)(ii): The mitigation strategy *shall* include a section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. The mitigation strategy must also address the jurisdiction's participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.

Requirement: §201.6(c)(3)(iii): The mitigation strategy section *shall* include an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization *shall* include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

Appendix B-1: Palm Beach County Initiatives

Palm Beach County and its 38 municipalities participate in a full range of federal, state and local mitigation programs and initiatives. Representative of these programs and initiatives are the Unified Local Mitigation Strategy (LMS), Community Rating System (CRS), National Flood Insurance Program (NFIP), Flood Mitigation Assistance Program (FMA), Pre-Disaster Mitigation Program (PDM), Hazard Mitigation Grant program (HMGP), Emergency Management & Assistance Program (EMPA), CERT, Continuity of Operations, Post Disaster Redevelopment Planning (PDRP), ESF18, Private-Public Partnership, counter-terrorism and radiological emergency preparedness initiatives, hazardous materials, etc. The overarching purpose of these activities is the elimination or mitigation of hazards presenting significant risk to the county and its residents. At this writing, Palm Beach County is involved in a detailed self-assessment and upgrade (as necessary), of its mitigation programs and activities in the context of the jurisdiction's overall Emergency Management program as part of its efforts to meet or exceed the national standards required to become accredited under the Emergency Management Accreditation Program (EMAP). The county hopes to be among the first Florida communities fully accredited under EMAP.

The Unified Local Mitigation Strategy program and its companion mitigation programs are described in greater detail in Section 4.1.4.

A major mitigation priority of the LMS is the reduction of repetitive flood loss properties. The county and its CRS participating municipalities track repetitive loss properties countywide on an ongoing basis using data gathered annually from FEMA and the State's Focus reports. For mitigation planning and strategy development purposes, LMS maintains updated GIS maps and informational databases of repetitive loss property locations relative to historical flood areas and designated Special Flood Hazard Areas. Repetitive loss properties are an ongoing discussion and planning priority for the LMS, CRS, and Flood Mitigation Technical Advisory committees. These committees, comprised of public and private sector representatives, are encouraged to develop and promote mitigation project ideas and strategies. At this writing, approximately 40 flood mitigation projects were in various stages of execution or on the drawing board of the Technical Advisory Committee.

In accordance with CRS guidelines, letters are mailed annually to repetitive loss property owners by the county and municipalities explaining NFIP program benefits, the availability of mitigation assistance funding through the Flood Mitigation Assistance program and other mitigation assistance programs.

Information and support is provided in a variety of forms to potential FMA applicants to assist them in developing projects and preparing application packages. Through the county's new LMS committee structure, the Technical Advisory Committee is available to offer technical guidance and assistance to applicants, including assistance in preparing benefit-cost analyses.

Mitigation projects are prioritized and implemented according to their direct potential for loss reduction or for their potential in contributing to longer-term, comprehensive plans and strategies for loss reduction. Once projects are underway, it is the responsibility of each jurisdiction to support and monitor performance in accordance with FEMA, state

and local guidelines and codes and to oversee and coordinate documentation and funding processes.

In addition to support of projects, mitigation is encouraged and promoted through a variety of community awareness and education activities including presentations, workshops, expos, panel discussions, plan reviews, publications, websites, etc. prepared and presented utilizing networks of public-private sector partners. As opportunities present themselves, lending institutions and insurers are urged to provide financial incentives for mitigation. Jurisdictions are urged to accelerate permitting and inspections and, if allowable, to waive or reduce fees for mitigation projects. In addition to mitigation incentives, millions of dollars of annual insurance premium savings are realized by a significant segment of county residents residing within the county's CRS participating jurisdictions.

Involvement of Planning, Zoning, Building, Fire-Rescue and other departments in LMS activities, including committee participation, bolsters communication among key agencies and the LMS and ensures that mitigation interests are appropriately represented in local building codes, fire codes, land-use ordinances, flood loss prevention ordinances, and other governing documentation.

The Palm Beach County Unified Local Mitigation Strategy plan articulates the unified goals and objectives of the county and its municipalities to avoid and/or reduce long-term vulnerability to hazards identified by the hazard identification and risk assessment processes. More detailed descriptions of the strategies, programs and actions are contained in the body of the plan and reflected in the list of prioritized projects in Section 5 and Appendix E. Under the revised committee structure of the LMS program, increased attention is given to expanding and refining hazard-specific mitigation strategies exclusive of jurisdictional boundaries, capabilities and interests and to giving appropriate attention to mitigation in planning future land uses (see Appendix D).

The process and criteria employed for ranking mitigation projects and initiatives are described in detail in Section 5.0 of the LMS plan. In response to new federal guidelines applying to grant awards through the Pre Disaster Mitigation, Flood Mitigation Assistance and Hazard Mitigation grant programs, particular emphasis is given to technically feasible and environmentally responsible projects having attractive ratios of loss reduction benefits to cost. Projects involving hard to quantify, but otherwise worthy, benefits are still given serious consideration in light of different sets of criteria and are referred to appropriate alternative funding sources not requiring stringent benefit-cost justifications.

Short-term and long-term recovery strategies are addressed by the County and municipal Continuity of Operations Plans, the Comprehensive Emergency Management Plan, the Post-Disaster Redevelopment Plan, and specialized plans and procedures covering key recovery issues such as debris removal, public services resumption, temporary housing, unmet needs, etc. These plans, procedures and projects address and provide guidance on priorities, processes, schedules, resource requirements, restoration and redevelopment of critical facilities, infrastructure, services, and economic redevelopment.

The Palm Beach County Comprehensive Plan includes the following elements: Land Use, Transportation, Housing, Utility, Recreation and Open Space, Conservation,

Coastal Management, Intergovernmental Coordination, Capital Improvement, Economic, Fire-Rescue, Public School Facilities, Health and Human Services, Library Services and Historic Preservation. These elements define the components of the community and the interrelationship among them, integrating the complex relationships of each of these elements in reference to the people who live, work and visit Palm Beach County. Linkages of the COMP plan and LMS have been incorporated into the COMP plan.

Post-disaster mitigation initiatives are developed in response to needs and opportunities identified through collective federal, state and local inputs following the guidance offered by the Post Disaster Redevelopment Plan. The County and LMS members are also available to work state and federal Mitigation Assessments Teams. It is the county's goal following disasters to rebuild to a higher standard (meeting or exceeding codes) and, whenever practicable, to apply sound mitigation practices to reduce future risk.

Appendix B-2: Jurisdictional Initiatives

Appendix B-2 provides a brief summary of representative jurisdictional initiatives reported by the County's 38 municipalities:

- City of Atlantis

The City of Atlantis has instituted a high speed notification solution (reverse 911) for automating processes of delivering critical and other information to responders, citizens and other interested parties.

We participate in the Community Rating System program. Our rating of 8 permits our residents in the special flood hazard area to obtain a 10% reduction in their flood insurance premiums.

We provide our staff with opportunities to attend training seminars to advance and perfect their skills and knowledge relating to natural, societal and technological hazards.

We contract with the City of Greenacres for Fire Protection and EMT services. Eleven of our police officers have EMT training, and six of those are also trained as firefighters, maximizing the coordination between the City of Green Acres and the Atlantis Police Department.

- City of Belle Glade

The City of Belle Glade is not presently active in the CRS program, but hopes to rejoin the program. The city has an active storm water rehabilitation and drainage program as part of its NPDES affiliation. Storm drainage improvements to the Hillsboro Canal are an ongoing priority. The City does swale work and storm drain cleaning on a daily basis. As the city rebuilds its streets, it is installing and/or upgrading storm drain systems. The City maintains a website for public outreach and provides translated editions of hurricane and flood guides in Spanish and Creole to its immigrant population. The City plans to link its website to the county's flood information website. HAZMAT training is offered through county resources as needed. Shuttering of Public buildings is also an ongoing priority for outside funding.

- City of Boca Raton

The City of Boca Raton has a continuous program of installing hurricane shutters on new construction and replacing older shutters with shutters that meet current building codes.

The City uses a variety of methods to educate its residents regarding all types of disasters, as well as special programs for flood mitigation and hurricane preparedness. These methods include use of the City's cable

channel 20, a low-powered City radio station, classes, presentations, videos, printed materials on a variety of emergency issues, and a special hurricane flier mailed to all households within the City. The City has a contract in place in the event that a large number of area households must be contacted for emergency purposes. Currently the telephone emergency notification system can call approximately 60,000 telephone numbers within an hour.

In addition, the City of Boca Raton has implemented the Community Emergency Response Team (CERT) program, training over 300 people, and will soon initiate a local Citizen Corps chapter. Continuing education and drills, using a variety of topics and scenarios, keep up the interest and skills of the CERT participants.

The City requires a storm water drainage plan for all new construction. Also, the City administers an on-going storm water inspection and maintenance program, removes debris from catch basins, as needed, and annually trims trees along A1A.

The City's building code requires brace gable and roof framing; trusses manufactured in accordance with local wind models, and finished floor elevations to be 18 inches above the minimum 100-year flood level. Also, the City incorporates an exterior glazed opening requirement to provide for hurricane missile impact protection.

Flooding concerns have been addressed in its flood damage prevention and floodplain management regulations. They include provisions such as anchoring to prevent flotation, collapse or lateral movement of structure, as well as requiring steps be taken to afford protection of electrical and generating, heating, ventilation and air conditioning equipment from flooding.

Being in the National Flood Insurance Program (NFIP) has allowed the City the opportunity to participate in the Community Rating System (CRS). CRS involvement directly relates to reduced homeowner flood insurance rates. Boca Raton has a CRS rating of 8. This enables City residents to realize a 10% reduction in their NFIP rates.

Employees from departments throughout the City have attended a broad range of classes on various aspects of emergency management, including response activities, volunteer management in disasters, damage assessment and cost recovery, use of technology for emergency management, mitigation, and terrorism. City building inspectors have taken courses on: retrofitting and flood mitigation, hurricane-resistant structural design, roofing updates, wood construction and fire resistance. Drills and exercises are held throughout the year with staff members at all levels from all City departments. The City's Emergency Preparedness Plan involves all departments and is updated annually.

In addition, the City coordinates with the County and other nearby communities and organizations through participation in the LMS Steering

Committee, the Local Emergency Management Network (LEMN), the CRS program, Continuity of Operations (COOP) planning, and many other emergency management initiatives. We work closely with the Red Cross regarding emergency shelter issues, and with Florida Atlantic University to hold exercises and share information and resources.

The City is a participant in the Statewide Mutual Aid Agreement and the Fire Rescue Services Department has mutual assistance agreements with fire rescue departments in the County and neighboring communities.

The City's Emergency Operations Center (EOC) is a dedicated facility equipped with computers, weather station and satellite, specialized emergency management/communications software, satellite telephone, and Radio Amateur Civil Emergency Services (RACES) equipment. Technology upgrades and expansions for the EOC are reviewed annually and implemented as necessary.

- City of Boynton Beach

The City of Boynton Beach has initiated a number of storm water infrastructure projects designed to address flooding problems in the city's central area. These include construction of a large retention basin in the city's downtown watershed area as well as the replacement of existing clay sewer mains to eliminate groundwater infiltration. In addition, the city has initiated the replacement of aging asbestos water mains with cement lined ductile iron pipe in order to provide code compliant fire protection for the area. The city has also introduced a new Water, Wastewater and Storm water rate structure to encourage conservation.

Being in the National Flood Insurance Program (NFIP) has allowed the City the opportunity to participate in the Community Rating System (CRS). CRS involvement directly relates to reduced homeowner flood insurance rates. Boynton Beach has a CRS rating of 8. This enables City residents to realize a 10% reduction in their NFIP rates.

In 2004 the city adopted local administrative amendments to the Florida Building Code establishing minimum building and construction standards. Among these is an ordinance addressing impacts of construction. This requires the developer, owner or contractor of new residential development resulting in a decrease of 800 square feet or more of permeable area to provide a professionally prepared site drainage plan.

The City recently added an additional fire station to the southeast quadrant of the city and relocated another station to provide coverage to the southwest quadrant. A fifth fire station was approved and is now under construction in the northwest quadrant of the City that will also serve as the fire headquarters and emergency operations center.

The City is also updating existing facilities. It is using the proceeds of a federal grant to fund the installation of an updated hurricane barrier system for the second floor of the City Hall Complex. In order to protect

vital records and meet state requirements the city has also entered into an agreement with a national provider for disaster recovery services for its information technology infrastructure.

As part of its Local Housing Assistance Plan the City of Boynton Beach has stipulated that funds from the State Housing Initiative Partnership Program (SHIP) will be directed to provide emergency repairs to income eligible households in the aftermath of a natural disaster to address emergency housing needs.

- Town of Briny Breezes

Briny Breezes is a very small coastal town, occupying an area of less than .1 square miles. Year round residents total just over 463. An additional 800 plus are seasonal residents.

With funding assistance obtained through the Hazard Mitigation Grant Program, the town hall was fitted with hurricane shutters. Plans currently call for securing a portable generator to operate the town's lift stations during storm related power outages. As a coastal community, flood, wind, and surge mitigation remain primary priorities.

At this writing, the town is in the process of entering long-term agreements with the City of Boynton Beach for fire and medical services and with Boynton Beach for police services. The town retains a third party engineer and building inspector to ensure code enforcement is in conformance with Florida Statutes. The town recently conducted a comprehensive study to ensure its Comprehensive Growth Plan complies with applicable building codes.

The town raises public awareness for disaster preparedness through a number of initiatives including annual mailings to all residents and hurricane preparedness messages and tips posted on the town's website. The town maintains an ongoing program of yard and open space debris cleanup to reduce the potential for windstorm damage.

- Town of Cloud Lake

The Town completed a storm drainage upgrade, which included additional roadside swales in 1992. In 1993, the drainage pump was replaced with a more modern up-to-date system. And in 1999, the 24" culvert under Lang Road was replaced with a 30" culvert.

Current building codes require bracing and strapping of roof in framing and must meet wind load specifications, impact resistant or glazing required of all openings.

The town participates in the Community Rating System program. It has a rating of 8, which allows its residents to receive a 10% reduction on their flood insurance premium. Flooding concerns are addressed in the flood damage prevention and floodplain management regulations. These

regulations require finished floor elevations to be 24" above the base flood elevation or 18" above the crown of the road, whichever is higher.

The town has a Storm Drainage Regulation Ordinance. It requires all new development to provide adequate drainage for a five-year frequency, 24-hour duration. Also, the town has established a set of maintenance operating procedures for its storm water drainage system, which includes regularly scheduled maintenance.

Cloud Lake has established Outreach Program. It contains information about flooding and hurricane preparedness tips. Information is distributed to residents and out-of-town property owners at least annually. Hurricane guides are also included in this distribution. In addition brochures on flooding, hurricanes, tornadoes, etc are available at the Town Hall.

- City of Delray Beach

The City of Delray Beach has undertaken numerous capital projects to retrofit critical city facilities. They include: shuttering the police, fire stations, environmental services, water treatment plant, and lifeguard headquarters. Also, new generators have been installed at the raw water wells, 6 new storm water pumps stations, and a radio telemetry monitoring system for public utilities.

The city has implemented its Storm water Master Plan that provides for drainage upgrades to verify that all areas of the city can accommodate a minimum 10-year flood event. Regularly scheduled maintenance includes exercising city emergency generators once a month, and regular debris removal is conducted by the BFI through Code Enforcement Department.

The city's building code requires brace gable and roof framing; trusses manufactured in accordance with local wind models, and finished floor elevations to be 18 inches above the minimum 100-year flood level. The city code also requires impact resistance or glazing for building openings.

Being in the NFIP has allowed the city the opportunity to participate in the CRS. This CRS involvement directly relates to reduced homeowner flood insurance rates. Delray, with a CRS rating of 9, enables their residents to realize a 5% reduction in their NFIP rates.

Emergency drills including structural fires, tornadoes, chemical spills, and terrorist response training. Also, the city sends staff to various training conferences (Federal Emergency Management Center in Maryland, National Fire Protection Association, and the Building Officials Association of Florida).

The fire department distributes hurricane preparedness pamphlets, and does presentations to public and private groups. The fire department also conducts citizen training classes on Emergency Response Training (CERT) to residents and other communities.

The City has projects on the Project List, which are all preventative measures. The City proposes to rehabilitate eight of the barrier island storm water pump stations as a preventative measure to improve the drainage capabilities in this critical area. Finally, the City proposes to construct a major drainage trunk main in areas on the barrier island that have experienced ponding during storm events.

- Town of Glen Ridge

The Town of Glen Ridge is proactive with mitigation initiatives. The town has hazard specific building codes. The town has a public information campaign to educate its residents. The town encourages its employees to attend preparedness and professional training. The town has an emergency operations and post-disaster recovery plan. Glen Ridge supports the acquisition of property as a mitigation technique. In addition, the town retrofits its government buildings.

The town promotes maintenance programs such as storm water drainage, tree trimming and general litter removal. There are flood damage ordinances in place. The town has a warning system for its residents.

The town used to participate in the CRS program. However, the town does plan on reapplying but will have to start with FEMA from scratch. The town conducts ongoing public awareness campaigns on hurricane preparedness, flood tips and information, and other hazard-related topics, through its quarterly newsletter that is distributed to all residents.

The Town of Glen Ridge is a small community with a population of less than 300 and occupies an area of about .2 square miles. For the past six years the town has focused on hurricane mitigation and resolving recurrent flooding problems. Unable to secure grant funding, the town recently self-funded the elevation and shuttering of its Town Hall.

During recent flood events, the town's sewage system overflowed into the C51 canal. The community is part of a major drainage improvement project being investigated by Palm Beach County and the South Florida Water Management District to resolve this and other flooding problems in the C51 basin.

- Village of Golf

The Village of Golf has incorporated hazard specific building codes. The residents also can take advantage of tax incentives for mitigating. The village of Golf conducts a public information campaign to educate their residents. The employees of Golf receive preparedness training. Some mitigation initiatives the village partakes in are maintenance programs, storm water drainage. The village has in place emergency operations plan and post-disaster recovery plan. The Village of Golf also has a warning system in place.

- City of Greenacres

To reduce the loss of life, property, and repetitive damage, the City of Greenacres has identified potential projects as part of the Palm Beach County LMS.

- Make structural improvements/retrofit to the roof of the City's Public Safety building that serves as the City's Emergency Operations Center.
- Install hurricane shutters that comply with the Florida Building Code on the windows and glass doors at City Hall.
- Rescue tools & equipment for emergency rescue/recovery personnel.
- Install a generator at City Hall to provide emergency electric power.
- Community Awareness Campaign
- Emergency Preparedness Video

To achieve a safe and sustainable community, the City annually assesses Capital Improvement needs. Storm water Management has been identified as a mitigation measure; \$40,000 has been allocated in FY 2006 for canal cleaning.

To reduce potential repetitive loss properties, the City adopted the Flood Damage Prevention Ordinance #2003-17 to ensure that any properties developed within the floodplain meet the required regulations. Since there are no SFHA's within the City's boundaries, the City does not participate in the CRS program.

To optimize the establishment of partnerships, the City participates in Intergovernmental Coordination. In addition to the Local Mitigation Strategy initiative, participation in other pre- and post-disaster coordination mechanisms includes:

- Metropolitan Planning Organization coordinates roadway improvements.
- Palm Beach County Comprehensive Emergency Plan coordinates and identifies responsibilities during disaster situations.
- Multi-Jurisdictional Issues Coordination Forum establishes communication between local governments and service providers.
- Local Emergency Management Network (LEMN) furthers communication among agencies with involvement in emergency management issues.

To continue the distribution of flood information, hurricane/emergency brochures are made available to residents and visitors; certain information is distributed periodically to residents in the City publication, Citylink; and emergency information is presented in person to gatherings of Home Owner Associations.

To improve the coordination of mitigation concerns, the City actively participates in the LMS and LEMN projects. Additionally, the building code requiring gable bracing, glazed openings protected for impact resistance, and buildings constructed in accordance with the 140 mph fastest-mile wind speed, is strictly enforced.

To have a program in place for orderly recovery after a disaster, the City Council has adopted the Greenacres Emergency Management Plan.

To ensure the implementation of a local hazard mitigation strategy, the City Council has adopted the plan produced by the Palm Beach County Local Mitigation Strategy.

- Town of Gulf Stream

The Town has completed several storm drainage projects and upgrades to existing system. These include the installation of two (2) submersible pumps, pipe systems, easements and generator to provide emergency electric for pumps and Town Hall EOC. Various other catch basins and drainage pipes to approved outfalls.

The Town participates in the Community Rating System program. It has a rating of 8 which allows its residents to receive a 10% reduction in their flood insurance premium.

The Town has participated in emergency drills with the City of Delray Beach. Delray Beach provides fire and EMS for the Town.

The Town paid for a "Wastewater Feasibility Study" from its engineers, Mathews Consulting Inc., covering the entire Town. This study has identified five (5) service areas A-E with special consideration of needs for each. The study provided cost estimates, verified available capacity and identified regulatory agency involved for approval of project.

- Town of Haverhill

The Town Hall and Maintenance Buildings have been fitted with impact resistant storm shutters. In addition to the drainage improvement projects completed in the Briarwood and Tall Pines developments, the Town recently completed the Durham Street drainage project, the Rutherford Road improvement project and the Briarwood curb and gutter project that eliminated some storage of water that would have accumulated in the street.

There are additional projects pending to relieve flooding within the Town and immediate adjacent areas. Palm Beach County has been awarded a FEMA HMGP for the Briarwood area and Palm Beach County has received approval for a flood mitigation project from Woodland Avenue to the E-3 canal.

The Town of Haverhill has installed a generator at the Town Hall facility to provide a continuity of emergency and business services during major storm events.

The Town of Haverhill had received a grant from Palm Beach County to resurface 90 percent of the Town's roads resulting in drainage improvements throughout the Town.

During Tropical Storm Fay, there was substantial flooding throughout Cyprus and Park Lanes, recently annexed areas of the Town. The Town of Haverhill may wish to submit for HMGP funding to alleviate this problem by piping the swales and resurfacing the streets resulting in improved drainage and runoff in the area.

The Town of Haverhill is actively pursuing funding to install a lift station at the Town Hall property. The current budget includes funding for swale reconstruction, paving, and grading roads and the installation of sidewalks along Club Road.

Future Capital Improvements include Outfall ditch piping to Club Road drainage and installation of an exfiltration trench at the Towner Park subdivision.

The Town of Haverhill distributes quarterly newsletters to all residents to promote public awareness, disaster preparedness and mitigation tips.

Other than the grant received from Palm Beach County, funding for all projects has been through the Town's budgetary process.

- Town of Highland Beach

The Town of Highland Beach has retrofitted a number of facilities to make them more disaster resistant. Also, the town has fitted all public buildings with hurricane panels or impact glass. As documented in its Comprehensive Plan, Capital Improvement Element, the town plans to implement a number of hazard mitigation capital projects and initiatives over the next five years.

The Town is using the current edition of the Florida Building Code as mandated by the Florida Building Commission.

Highland Beach has addressed hazards in its Comprehensive Plan. In addition, the town has prepared and adopted a Floodplain Management Plan in 1997, which qualified the town to be in the NFIP, qualifying the residents of the town to receive reduced flood insurance premiums. Reductions in the NFIP premiums have been achieved, because the town actively participates in the CRS program. The Town of Palm Beach has a CRS rating of 9, which enables their residents to realize a 5% reduction in their NFIP rates. The Town has installing an automatic telephone notification system that will play recorded information regarding imminent emergencies.

- Town of Hypoluxo

Up to now, Hypoluxo has self-funded its mitigation initiatives. The town participates in the Community Rating System, holding a class 8 rating, which enables residents to receive a 10% reduction in NFIP rates. All public buildings are fitted with hurricane shutters. Emergency services are contracted out to surrounding communities.

Annually, in conjunction with its CRS outreach activities, the town distributes mailings to all households to promote public awareness and to provide residents with disaster preparedness and mitigation tips and information. The town also offers disaster preparedness brochures at its town hall. Town officials hold regularly scheduled meetings with home owner associations on a variety of subjects including disaster preparedness and mitigation measures.

- Town of Juno Beach

In 2004, the Town amended their local codes to bring them current with the change to the Unified Florida Building Code. The municipal complex is fitted with storm shutters and impact glass, has an emergency generator and utilizes a reverse 9-1-1 emergency alert system.

The Town participates in the Community Rating System program and has an impressive class 5 rating (currently the highest rating in the County), which qualifies residents with a 25% reduction on their flood insurance premiums. Residents receive frequent newsletters containing hurricane, flooding and other disaster preparedness information. The Town hosts resident meetings as part of its CRS program. One of the Town's two loss structures was recently mitigated by a special drainage improvement project. The Town has two repetitive loss properties.

Because the Town's coastline is particularly susceptible to serious beach erosion, it maintains an aggressive beach restoration and re-nourishment program. The Town recently annexed 340 acres of environmentally sensitive land which it plans to maintain in its nature state.

- Town of Jupiter

The Town of Jupiter has made improvements to major drainage canals and systems over the last couple of years. The Jupiter Hospital drainage canal has been cleaned and modifications to the fixed weir structures have been made. The modifications allow for an increased discharge of water during a major storm. The salinity barrier has been converted to an operable structure allowing the town to discharge water prior to and during a major storm event. The Loxahatchee Drive canal has been improved with erosion control system. Sims Creek has had a revetment installed for erosion control. The Pennock Industrial Park area drainage system has been improved to prevent street flooding. The Cypress Drive drainage project has been completed.

The town has implemented its Storm water Master Plan that recommends drainage improvements for areas that have marginal systems. The Master Plan was updated in September of 2007. Regularly scheduled maintenance includes exercising the pump station generators once a month and inspecting inlets for debris on a regular basis.

The town has adopted the 2004 Florida Building Code. The criteria used for finish floor elevations is the greater of the South Florida Water Management District's criteria, six inches (6") above the 100 year flood elevation established by the FIRM map or eighteen inches (18") or seven inches (7") (respectively for residential and non residential construction) above the adjacent crown of the road.

The town's "Guide for Development Design and Construction Standards" provides the minimum design criteria for developments. Road design criteria for developments are based on the ten (10) year one (1) day rainfall event. Local roads are permitted to flood to the crown of the road. Collector roads must have their width of the road dry. The Guide also has criteria for erosion and sediment control.

The town has a Storm Emergency Response Plan that outlines the activities it will undertake in the event of an approaching hurricane or tropical storm. An Emergency Operations Center was built in 2002 and is fully operational. The town is in the process of developing a floodplain master plan.

Being in the NFIP has allowed the town the opportunity to participate in the CRS. This CRS involvement directly relates to reduced homeowner flood insurance rates. Jupiter, with a CRS rating of 7, enables their residents to realize a 15% reduction in their flood insurance rates.

- Town of Jupiter Inlet Colony

The Town of Jupiter Inlet Colony has retrofitted its Administration/Police facility with hurricane shutters to make it more disaster resistant. The Town has a portable generator to provide power to the Administration/Police facility in the event of an emergency situation. The emergency generator is maintained and exercised regularly.

In 2008, the Town updated its Building Code by adopting by reference the Florida Building Code together with all amendments thereto, including but not limited to, the Building Code 2004 edition with 2005, 2006, and 2007 Amendments, the National Electrical Code 2005 edition, Fuel Gas Code 2004 edition with 2005 Amendments, Mechanical Code 2004 edition with 2005 Amendments, Plumbing Code 2004 edition with 2005 Amendments, Residential Code 2004 edition with 2005 and 2006 Amendments, Florida Existing Building Code 2004 edition with 2005 and 2006 Amendments, and Florida Fire Prevention Code 2004 edition.

In addition to the Building Code, the Town's Code of Ordinances addresses coastal construction, flood damage prevention and reduction, and storm

drainage regulation. Coastal construction requires all new construction to be anchored to their foundations in such a manner as to prevent flotation, collapse, or lateral movement of the structure. Pile foundations are required for structures located in Federal Emergency Management Agency Flood Insurance Rate Map "V" "velocity" zones or where impacted by wave action. This requirement for all new construction as well as substantial improvements is also applicable to flood damage prevention in all areas designated special flood hazard. Flood damage prevention requires electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities in areas of special flood hazard to be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding. The storm drainage regulation requires all new construction to provide a plan for adequate drainage for a five (5) year frequency, twenty-four (24) duration rainfall intensity curve. Additionally, the Town has established a storm drainage maintenance plan, which provides for periodic storm water inspection of its drainage system and hydraulic vacuum cleaning of all basins and lines. Bi-annual inspection of properties in the Town requires and enforces the clearing, cleaning, and trimming of vegetation and trees or the removal of dead or substantially dead trees and other abatement, such as removal of coconuts, as the Town deems necessary for the health and safety of its residents. Coastal Management has also been addressed in the Town's Comprehensive Plan.

Jupiter Inlet Colony has a Hurricane Plan for safeguarding the residents and outlines the activities the Town will undertake in the event of an approaching hurricane or tropical storm. The Plan provides for coordination of effective emergency management utilizing and cooperating with existing government agencies and resources in conjunction with private resources and equipment. Post-disaster inspection, damage assessment, and recovery are also addressed.

The Town disseminates information relative to disaster planning, preparedness, evacuation, and mitigation to its residents via an automated telephone messaging system and a community newsletter. It also coordinates and works in cooperation with the Property Owners' Association, which has established a "telephone squad" to quickly inform and instruct residents in the event of an emergency situation. Residents are advised to monitor local radio and television stations for weather updates and evacuation information. Copies of Palm Beach County's Hurricane & Flood Survival Guide are available to residents at the Town Administration/Police facility.

- Town of Lake Clarke Shores

The Town participates in the Community Rating System program and currently has a 9 rating. This gives our residents a 5% reduction in their flood insurance rates.

Storm drains are maintained by the Utilities Department. The drains are checked on a regular basis to ensure that the drains are free from debris and are in good condition.

The town has an emergency generator that will allow the town hall and police department to continue operation in the event of power outages during tropical storms, hurricanes or other disasters. The generator is tested on a weekly basis to ensure proper working order.

In April, 2007, the Town began construction on the new Town Complex. The Town Hall and Police Department buildings have been built as per current construction standards, which include having impact resistant windows and meeting wind load requirements. The Town Hall has been completed and in use since April 2008. The Police Department/EOC has been in use since November of 2008. The Town relied solely on town funds to finance the construction.

The Chief of Police attends Florida Police Chief's Association seminars that include emergency management classes. Town Police Officers have received incident Command training and Biological, Chemical and Explosives training. The officers participate in ongoing training as 1st responders and receive EMT training.

Town residents are mailed a newsletter each month. This newsletter contains various informational articles including flooding and hurricane preparedness. A Code Guidelines booklet also offers hurricane information and tips on how to prepare for an upcoming storm, in addition to information on various town codes.

- Town of Lake Park

Lake Park is a town of approximately 9,100 residents located on the Intracoastal Waterway in northern Palm Beach County. The Town was established as Kelsey City in 1923. Its Town Hall was constructed in 1927 and is listed on the National Register of Historic Places. The Town Hall not only survived the 1928 hurricane, but, at the time, it served as a shelter for residents. The Town Hall has recently been restored and hardened with impact resistant windows that met standards for Historic Preservation. Accordion shutters and new doors are the next hardening projects proposed for Town Hall.

Lake Park participates in the Community Ratings System as a Class 9 community. This CRS involvement directly relates to a reduction in homeowner flood insurance rates. A CRS rating of 9 enables their residents to realize a 5% reduction in their NFIP rates.

The Town has an active, ongoing program of drainage improvements and swale reconstruction, jointly funded with local, county, state, and federal funds. In 2008 the Town initiated a Storm Water Utility to help expedite storm water improvements. The Town is a NPDES community. A major storm drainage project proposed for 2009 is Lake Shore Drive (\$3.5 million) anticipated to be funded by the storm water utility, legislative appropriation, Florida Department of Environmental Protection (FDEP), TMDL and 319 Non-Point Source Pollution. Also a Park Avenue reconstruction project (\$3.1 million) anticipated to be funded by FDEP,

TMDL, Palm Beach County, FDOT/MPO and 319 Non-Point Source Pollution, will include storm drainage improvements.

A seawall project at Lake Shore Park has been completed funded in part by FIND and FWC.

Cleanup and tree replacement at Kelsey and Lake Shore parks associated with the 2004/2005 hurricanes have been accomplished funded in part by a Fish and Wildlife conservation grant and a Florida Department of Agriculture Urban Forestry grant.

The Town's Lake Park Harbor Marina is a priority with future mitigation initiatives to include two breakwater barriers, generators, and dredging.

Additional hurricane hardening projects include:

- Public Works/EOC windows and generator (\$75,000)
- Library accordion shutters, roof and generator (\$100,000)
- Town Hall accordion shutters on doors on north side of building (\$130,000)

A project is currently underway to reconstruct alleyways in the downtown district. The project includes better storm drainage. The project is funded in part by CDBG.

- City of Lake Worth

The City of Lake Worth continues to make enhancements that protect the citizenry and employees of the community during devastating weather. Through a grant from the State we were able to receive funding that allowed the city to purchase a telephonic system that allows us to contact each citizen in times of an emergency. This communication format permits our Emergency Operation Center to contact specific areas of the city and alert residents to either evacuate the area or alert them of a specific problem in their neighborhood.

Through another grant the City was able to purchase shutters for our police/fire dispatch area. This addition ensures our emergency operators remain safe during inclement weather. Our most precious asset, our employees, can now work without fear of harm.

The City in its attempt to protect its beach from soil erosion has planted vegetation that protects the shoreline during high wave action. The City also ensures during the season that our catch basins are cleared at least three times between June and November.

The City passes out reminders in public places (libraries, restaurants, bars, and city structures) the need for all to prepare for the upcoming hurricane season. Table toppers are placed on tables and counters of these establishments asking customers "ARE YOU READY"? This medium has allowed us to reach potential victims and suggest they begin preparations now to protect their families from harm.

Being in the NFIP has allowed the city the opportunity to participate in the CRS. This CRS involvement directly relates to a reduction in homeowner flood insurance rates. City of Lake Worth with a CRS rating of 9 enables their residents to realize a 5% reduction in their NFIP rates.

- Town of Lantana

Most town-owned facilities have been shuttered, including the Emergency Management Operations Center, which is housed at the First Baptist Church on Lantana Road.

Lantana participates in the Community Rating System. The CRS rating is a 9, which enables the residents to receive a 5% reduction in the NFIP rates. And, is a major participant in the Outreach Project Strategy (OPS). The town repaved all town roads during the period 2001-2003 and re-contoured all swales to restore proper drainage throughout the community. In 2004, the town's code was revised to require new developments to provide deeper swale cross sections for greater water retention and drainage capacity. All signalized intersections on Dixie Highway (US1) have been retrofitted with wind-resistant mast-arm traffic signal poles and the town plans to coordinate with the county to ensure all traffic signals east of Interstate 95 are retrofitted as soon as possible.

- The Town of Loxahatchee Groves

The Town of Loxahatchee Groves is 12.5 square miles with 29 miles of unpaved roads and 30 miles of canals. The Loxahatchee Groves Water Control District's (LGWCD) main responsibilities are the maintenance of secondary and primary drainage systems within our service area boundaries. The regional surface water management system is operated by the South Florida Water Management District (SFWMD). SFWMD does not get involved with the day-to-day operations of LGWCD. However, they do have permitting authority over outfall sites, allowable discharge rate, water use, and water quality.

The District builds, operates, and maintains canals and water control structures. In Loxahatchee Groves, seven north-south canals drain to the south into the C-51 Canal that flows west to the SFWMD's Storm Water Treatment Areas and east to the Intracoastal Waterway.

The District has the responsibility in proper management of storm water run-off. Each year the Town receives, on average, 60 inches of rain. The average rainfall in the Town equates to over 13 billion gallons. If you placed all of the water the Town received annually into one-gallon containers, those containers would circle the Earth over 50 times. It is important to manage the flow of this volume of water through the Town's canals for maximum protection and benefit to property owners.

The drainage system operates by gravity flow. Any storm water that is not absorbed into the ground moves southward through the Town in a

network of canals.

First the water flows into the Town's maintained canals known as the "secondary" drainage system. The final movement of the water is into the "primary" drainage system that consists of the larger canals, such as the C-51. The primary drainage system is the responsibility of the South Florida Water Management District.

The Town of Loxahatchee Groves was incorporated in November 2006 and the Town Council started meeting in March 2007. In the Town's short time, it has not received any grants for emergency related issues however; the Town is researching and pursuing grants in Fiscal Year 2008. The Town does not participate in the National Flood Insurance Program at this point in time. The Town has a brief and concise emergency management plan that will be activated along with the Town's Emergency Operations Center in the event of a disaster. The Town of Loxahatchee Groves has an active volunteer base that assists the Town in preparing the EOC for activation; Loxahatchee Groves Certified Emergency Responders Team. Emergency drills are held periodically. Staff is currently completing all necessary NIMS certification.

- Town of Manalapan

The Town has installed storm shutters at its Public Library, which is used as an emergency operations center during hurricanes and other disasters.

In 2003, the town amended their local codes to bring them current with changes in the various standard codes (e.g., fire prevention, gas, building, plumbing, electrical, mechanical) along with the Model Palm Beach Countywide Amendments to the building, gas, mechanical, plumbing, electrical, and roofing codes.

The town participates in the Community Rating System program. It has a rating of 9, which allows its residents to receive a 5% reduction in their flood insurance premium.

The town has a Storm Drainage Regulation Ordinance. It requires all new development to provide adequate drainage for a five year frequency, 24-hour duration. Also, the town has established a set of maintenance operating procedures for its storm water drainage system.

Manalapan has an established Outreach Program. It contains information about flooding and hurricane preparedness.

Also, new generators have been installed at the raw water wells, 6 new storm water pumps stations, and a radio telemetry monitoring system for public utilities.

The city has implemented its Storm water Master Plan that provides for drainage upgrades to verify that all areas of the city can accommodate a

minimum 10-year flood event. Regularly scheduled maintenance includes exercising emergency generators once a month, and regular debris removal is conducted by the Town staff through the Code Enforcement Department.

The city's building code requires brace gable and roof framing; trusses manufactured in accordance with local wind models, and finished floor elevations to be 18 inches above the minimum 100-year flood level. The city code also requires impact resistance or glazing for building openings.

Being in the NFIP has allowed the city the opportunity to participate in the CRS. This CRS involvement directly relates to reduced homeowner flood insurance rates. Manalapan, with a CRS rating of 9, enables their residents to realize a 5% reduction in their NFIP rates.

Emergency drills including structural fires, tornadoes, chemical spills, and terrorist response training. Also, the city sends staff to various training conferences (Federal Emergency Management Center in Maryland, National Fire Protection Association, and the Building Officials Association of Florida). The Town is also providing NIMS training to staff.

The fire department distributes hurricane preparedness pamphlets, and does presentations to public and private groups. The fire department also conducts citizen training classes on Emergency Response Training (CERT) to residents and other communities.

- Town of Mangonia Park

Mangonia Park participates in the Community Rating System program. The Town publishes and distributes a quarterly newsletter to all residents and businesses to keep the community abreast of projects and activities relating to flood and hurricane preparedness, mitigation, infrastructure, public safety issues, etc. At this writing, the town has a major storm water improvement project planned for the Hill Avenue area. The Town participates in the NPDEF program and has numerous storm water management, water quality, and storm structure cleaning projects on the drawing board. An emergency generator was recently installed at the water plant. The purchase of an additional generator is planned for the Town Hall/Police Administration building. Shuttering of all critical public buildings has been completed. The Town's next priority is setting up generators for public buildings.

- Village of North Palm Beach

The Village of North Palm Beach, on a continuing basis, updates local Codes to bring them to current standards. As of March, 2009, The Village has adopted the 2007 edition of the Florida Building Code. The Village Codes also include provisions for coastal construction, constructions requirements for canals, bulkheads, seawalls, docks, piers and erosion control structures as well as preservation of sand dunes and mangrove stands and flood damage protection.

In 2000, the Village started a dredging program for the internal canal channels. Phase 1, 2 and 3 of the overall project are complete. Phase 4 began at the end of 2008.

The Village has a Comprehensive plan in place that outlines and provides a long-range plan for the development and continued maintenance of the Village. Mitigation projects completed by the Village since 2007 include seven drainage repair projects, six of which have been routine repair projects and one being an emergency repair. The Village has funded each one of these repairs through their budgeting process.

The Village participates in the Community Rating System (CRS). The Village currently has a CRS rating of 8, which allows the residents to receive a 10% reduction in their Flood Insurance premium.

The Village participates and conducts National Pollutant Discharge Elimination System (NPDES) inspections for construction sites to minimize the impact of storm water erosion and sedimentation control.

The Village currently contracts out the sweeping of the alleys that parallel U.S. #1 on a monthly basis. This has reduced the amount of debris and litter that would have ended up in the Lake Worth Lagoon.

The Village publishes a monthly newsletter that is distributed to residents and businesses. The newsletter has provided pertinent information regarding hurricane preparedness and maintenance of drainage swales among other items. The Village website also contains helpful information reference to hurricane preparedness. In addition the Village makes available a new resident package that contains a brochure that outlines hurricane preparedness information. Pre-disaster educational programs are offered to any Village group that requests them and an annual Village-wide pre-hurricane season educational program is offered by the Public Safety Department.

The Village has an Emergency Response Plan that outlines activities that it will take in the event of an approaching hurricane. The Village encourages employees to become well versed in the Village's emergency management procedures. The Village receives automatic aid for fire and emergency medical related incidents as a result of a Level or Service requirement that has been instituted throughout Palm Beach County. The Village's Department of Public Safety Law Enforcement Division is a participant in Palm Beach county as well as NAMAC (Northern Area Mutual Aid Consortium of Palm Beach County). The Village of North Palm Beach is also a signer of the Statewide Mutual Aid Agreement.

The Village is represented as a member of the Local Mitigation Strategy Committee in Palm Beach County and is also a participating member of the Palm Beach County Emergency Management Team, which holds bi-monthly meetings on emergency management issues.

- Town of Ocean Ridge

In April 2000 the Town of Ocean Ridge started topographical surveying and a flood control study for storm water drainage for certain flood prone areas of Town. In December 2000 the flood control study was completed to provide design solutions and the estimated costs to alleviate these flooding problems. In August 2001 the Town directed the Engineers to design and permit a specific set of recommendations from the flood control study for the storm water drainage improvements. The Town is presently in the process of implementing the storm water drainage improvement project.

The majority of the Town's 13 Repetitive Loss Properties are located in the area where the Town is implementing the storm water drainage improvements. The Town actively cleans, maintains and repairs the existing storm water drainage system throughout the Town.

The Town completed a project of purchasing 2 portable 6" suction pumps for emergency situations to assist in alleviating flooding problems in flood prone areas of Town during storm events.

The Town participates in the NFIP Community Rating System Program. The Town has a rating of 8, which allows its residents to receive a 10% reduction in their flood insurance premiums.

The Town has adopted the Florida Building Code and the Palm Beach County Amendments to the Florida Building Code as the building code for the Town of Ocean Ridge. The Town has adopted the most recent editions of the Standard Fire Prevention Code as the fire code of the Town. The Town has also adopted the most recent edition of the Life Safety Code, as promulgated by the National Fire Protection Association (NFPA-101).

The Town has a flood damage prevention ordinance whose purpose is to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by different provisions. The Town has a storm water systems ordinance for the enforcement, inspections and monitoring of these systems, industrial activity, illicit discharges, spills and dumping whose purpose is to promote the health, safety and general welfare of the inhabitants and to comply with federal and state law and regulations regarding water quality. The Town has a landscaping ordinance, which has a section on dune preservation whose purpose is to protect the functional integrity of the beach/dune system. The Town has a coastal construction ordinance whose purpose is to provide minimum standards for the design and construction of buildings and structures to reduce the harmful effects of hurricanes and storms along the coastal areas of the town, in conformance with the requirements of *F.S. Ch. 161*. It is further the intent of this ordinance to establish a coastal protection zone as required by law.

The Town also has ordinances on minimum finished floor elevations in the construction of buildings, drainage requirements for construction, and flood damage prevention for utility systems.

The Town has a Hurricane Policy Manual that outlines the activities it will undertake in the event of an approaching hurricane or tropical storm. At least one hurricane preparedness drill is conducted annually.

The Town distributes flood and hurricane information; hurricane/emergency brochures are made available to residents and visitors, certain information is distributed periodically to residents in the Town newsletter and the Town newspaper, and emergency information is given to residents directly by contacting the Police Department.

The Town approved Resolution # 2001-07 adopting the Statewide Mutual Aid Agreement for catastrophic disaster response and recovery. The Town approved Resolution # 2000-15 executing an Inter-local Agreement between the Town of Ocean Ridge and Palm Beach County adopting the Local Mitigation Strategy.

- City of Pahokee

The City of Pahokee has retrofitted critical facilities to make them more disaster resistant. The City's Comprehensive Growth Management Plan addresses the following elements as mitigation initiatives air pollution, drought, flood, hazardous materials and Wellfield contamination. There are future land use ordinances to address floods, hurricanes and Wellfields. The City of Pahokee has adopted the Palm Beach All Hazards Local Mitigation Strategy.

- Town of Palm Beach

The Town of Palm Beach has retrofitted a number of facilities to make them more disaster resistant. Construction of a new central Fire-Rescue station and EOC began in May 2003. The projected completion date is July 2004. As documented in its Comprehensive Plan, Capital Improvement Element, the town completed the following projects in 2003: Lake Way storm drainage improvements from Orange Grove Road to Mediterranean Road. Storm drainage, water mains and sanitary sewers were improved or upgraded within the project area. Two sanitary force mains for the E-1 and E-2 pump stations were replaced during the Lake Way drainage improvements: the storm drainage improvement project from Emerald Lane to the D-4 storm water pumping station south of Miraflores Drive. The Town has completed the north-end and mid-town beach re-nourishment project. Three beach nourishment projects will be undertaken, north-end, mid-town and south-end.

The Town's Building Code, recently (2002) has been updated by adopting by reference the 2001 Edition of the Florida Building Code. The building code includes key hazard-specific provisions. The code requires: brace gable end roof framing, corrosion resistant hurricane clips, storm shutters

for windows, and exterior doors and skylight, and trusses manufactured to meet 140-mph 3 second gust. In addition, the Code requires sprinkler systems in new commercial and multi-family (3 or more units) structures, as well as in single family homes over 10,000 square feet. The town has amended the code to include requirements for uses using liquid fuel. They reflect the standards recommended by the National Fire Protection Association.

Besides the building code, other pertinent town ordinances address: coastal construction, dune removal or alteration, and flood damage prevention. The coastal construction code provides for more stringent building standards in the coastal building zone, the land area between the seasonal high water line of the Atlantic Ocean and the waters of Lake Worth. The purpose of the Dune Removal or Alteration Ordinance is to protect the functional integrity of the beach/dune system. It establishes exclusionary areas where no construction can occur or motor vehicles can travel. The town's Flood Damage Prevention Ordinance is to minimize public and private losses due to flood conditions by restricting or prohibiting uses, requiring flood damage construction techniques are applied at the time of initial construction, control alteration of the natural floodplain, control filling, grading and dredging, and controlling the use of flood barriers that might adversely affect neighboring properties.

Palm Beach has addressed hazards in its Comprehensive Plan (see Table D-2). In addition, the town has prepared and adopted a Floodplain Management Plan in 1997, which qualified the town to be in the NFIP, qualifying the residents of the town to receive reduced flood insurance premiums. Reductions in the NFIP premiums have been achieved, because the town actively participates in the CRS program. The Town of Palm Beach has a CRS rating of 7, which enables their residents to realize a 15% reduction in their NFIP rates.

The town has developed a Hazard-Specific Emergency Response Plan which includes: Hazard-Specific Emergency Response Plans, Emergency Response Plan Appendices, Functional Annexes, Functional Annexes Addenda, and Authority Reference. The Town conducted a five-week mock emergency response training, which included activating the EOC and involving personnel from all Town Departments.

The Town of Palm Beach is a member of the Florida Floodplain Managers Association (FFMA).

Staff involved with emergency management and building inspection are provided several opportunities each year to attend seminars and conferences to advance their skills and knowledge regarding natural and technological hazards.

- City of Palm Beach Gardens

The City of Palm Beach Gardens has been in FEMA's Community Rating System (CRS) for seven years, with a rating of 7 and will likely qualify for

a higher rating soon. The City participates in several CRS activities such as public outreach to residents in Special Flood Hazard Area (SFHA). These activities include providing flood zone information to residents and insurance agents, providing hurricane protection information in the local newsletter, and participating in the annual Hurricane Expo in cooperation with Palm Beach County. As a result of involvement in the CRS, reductions in the flood insurance premiums have been achieved by City residents.

The City also actively participates in FEMA's Community Emergency Response Team (CERT). The Fire Department hosts CERT training for all residents, as well as City employees.

The City has adopted the Florida Building Code. The building code includes key hazard-specific provisions. The code requires: brace gable end roof framing, corrosion resistant hurricane clips, storm shutters for windows, and exterior doors and skylight, sand trusses manufactured to meet the required wind load speed.

Besides the building code, the other pertinent City ordinance addresses flood damage prevention. The City's Flood Damage Prevention Ordinance is to minimize public and private losses due to flood conditions by restricting or prohibiting specific uses, requiring flood damage construction techniques are applied at the time of initial construction, control alteration of the natural floodplain, control filling, grading and dredging, and preserving open space when possible, in the flood plain. The City also requires elevation certificates for each newly constructed building in the SFHA.

The City has a Comprehensive Emergency Management Plan that outlines the activities it will undertake in the event of an approaching hurricane or tropical storm. Training is conducted annually for essential personnel and preparedness drills are conducted prior to the hurricane season. Staff has also been trained in such programs as Rapid Assessment Planning by the State of Florida.

The City requires a storm water drainage plan for all new construction. Also, the city administers an on-going storm water inspection and maintenance program, which involves removing debris from catch basins and canals, as needed. The City also is involved in an ongoing swale restoration project in the older areas of the City.

- Town of Palm Beach Shores

The Town of Palm Beach Shores has constructed significant infrastructure projects over the past 24 months. Included was the construction of eleven (11) open drainage areas providing additional exfiltration of storm water. These drainage areas were constructed at 5 ½ interior crosswalks throughout the Town and assist in groundwater recharge and improvement of water quality. Roadway improvements were made to Lake Drive, which included renovations of catch basin

aprons and grates as well as the replacement of a storm water pipe at Lake Drive and Bamboo Road. Provided exfiltration to a new public works entrance located on Cascade Lane at the north of the Town Municipal site. This area assists in groundwater recharge and improvement of water quality.

A hazardous spill program exists through an interlocal agreement with Palm Beach County, The City of West Palm Beach being primary responder to the Town of Palm Beach Shores. If there is a hazardous material spill in Town, it is required that appropriate state and local authorities are notified.

The Town flood control is dictated through SFWMD. All new development must comply with SFWMD requirements with a professional Building Official certifying all projects for compliance.

The Town of Palm Beach Shores, through its comprehensive plan, has a storm water drainage design for storms of 3-year frequency, 24-hour duration. The Town has also adopted an ordinance requiring new development and significant redevelopment projects to be in compliance with South Florida Water Management District requirements for both quantity and quality. Although new development is very limited, all projects have met the required quantities and quality as set by South Florida Water Management District with proper inspections being performed on all sites.

Being in the NFIP has allowed the town the opportunity to participate in the CRS. This CRS involvement directly relates to a reduction homeowner flood insurance premium rates. The Town of Palm Beach Shores, with a CRS rating of 9, enables their residents to realize a 5% reduction in their NFIP rates.

- Village of Palm Springs

The Village of Palm Springs is a Community Rating System participant, holding a class 8 rating. It conducts various mitigation and public outreach activities in accordance with NFIP and CRS guidelines. Its building codes have been upgraded in accordance with the state's Standard Building Code. The Village recently built new Administration, Recreation and Public Safety buildings that meet or exceed the new, more stringent, building standards, including hurricane shutters. The Village has made numerous infrastructure upgrades in its recently annexed areas, including construction and enlargement of swales for improved drainage, and the construction and interlinking of catchment basins.

- City of Riviera Beach

The City of Riviera Beach has installed a flexible wind abatement system on the administrative buildings to provide support during dangerous hurricane winds. The city recently installed an automatic telephone notification system that will play recorded information regarding imminent

emergencies that affect the residents of the community. Also, the City is in the process of installing a new generator in the Police/Fire Communications Center.

The City recently implemented an on-going storm water inspection and maintenance program to remove debris from catch basins, as needed.

The fire department distributes hurricane preparedness pamphlets, and does presentations to public and private groups. The City has a Storm Emergency Response Plan that outlines the activities it will undertake in the event of an approaching hurricane or tropical storm. At least one storm preparedness drill is conducted annually.

Staff assigned to the City's Emergency Management Team conducts tabletop emergency drills for response to emergencies such as tornadoes, chemical spills, and terrorist response training. City staff from Administration, Fire-Rescue Services, Recreation Services, Police Services, Public Works and Water Utilities has attended classes on emergency management.

The City adopted a new flood protection ordinance in 2001, which implemented new standards for finished floor elevations. Additionally, regulations addressing wetlands have been incorporated in site plan projects that require developers to maintain the wetlands or restore them if disturbed by construction. The City's dune re-nourishment and realignment standard requires that the dune aligns with the natural dune line. The City adopted a storm water management system in 2002 which imposed restrictions on all developments within the City and assessed fees on the developments depending on the type to offset the cost of managing the system.

To prevent the loss of essential services at the municipal complex, the City has weatherproofed the buildings and is making various renovations to update the facilities. Through the Comprehensive Plan, permanent residential development is being directed away from the Barrier Island and coastal high hazard areas. Over the past two years, the City Engineer and Building Official have taken courses including adopting new regulations in preparation for the City to be a part of the Community Rating System.

- Village of Royal Palm Beach

All of the critical public buildings in the Village of Royal Palm Beach, including Village Hall, Police and Fire Stations, Recreation Center, and Water Treatment Facility, are fitted with hurricane protection shutters.

The Village is an active participant in the Community Rating System to the extent necessary. Fortunately none of the village is within a 100 year flood plain so the amount of active participation needed is minimal.

A major drainage improvement project was recently completed in the La Mancha area following flooding in connection with Hurricane Irene in 1999. Other significant drainage improvements are underway along State Road 7. The Village has an ongoing drainage improvement program, and provides routine maintenance of swales, catch basins, etc.

Public outreach is accomplished primary through quarterly newsletters, which go out to all residents and businesses within the Village. These newsletters keep residents advised on the status of mitigation and public works type projects and provide general and seasonal preparedness tips and information on a variety of hazard threats. Village professional personnel keep abreast of disaster related practices through active participation in educational forums and training workshops.

- City of South Bay

The City of South Bay is small rural community situated in the extreme western area of the county near Lake Okeechobee. It is predominantly an agricultural community with a significant immigrant population. Better prepared and with a more modern road system, the community hopes to avoid a recurrence of a deadly hurricane like the 1928 storm that devastated the area. In the event of a disaster, the City has plans to coordinate with county and state enforcement agencies and with the School Board to safely evacuate residents (particularly the disadvantaged and elderly) to the City's primary shelter or out of the area.

The community actively supports public disaster awareness efforts, including multi-lingual publications and events directed at its large Spanish and Creole speaking population.

The Okeelanta Cogeneration Plant, a 74-megawatt biomass cogeneration project is located six miles south of South Bay. It is the largest bagasse/biomass cogeneration plant in the U.S. The plant provides process steam and power to area sugar refineries and sells its excess electricity to Florida Power & Light. To meet stringent emissions requirements, special initiatives have been implemented to protect the environment.

- Town of South Palm Beach

The town requires a storm water drainage plan for all new construction. Also, the town administers an on-going storm water inspection and maintenance program, removes debris from catch basins, as needed, and annually trims trees along A1A.

Being in the National Flood Insurance Program (NFIP) has allowed the town the opportunity to participate in the Community Rating System

(CRS). CRS involvement directly relates to reduced homeowner flood insurance rates. This enables town residents to realize a reduction in their NFIP rates.

In addition, the town has installed accordion shutters to protect the Town Hall and police department. A 90kw generator was installed and will supply the Town Hall, EOC, and police department during an emergency.

Also, a commercial ice maker was purchased to provide residents with ice for medical needs during an emergency.

The Town contracts with the County to use the Dialogic system on an as needed basis. The condominiums and residents are provided with hurricane and evacuation plans prior to hurricane season each year. The Town also implemented an emergency ID card system for key personnel so they can return to the island after an emergency.

The Town has government television channel that can be viewed by approximately 90% of the residents.

The Town also raises public awareness by distributing a hurricane guide to all buildings annually. Brochures are made available to the residents on a variety of disaster/emergency topics including hurricane information, insurance, pet care, business interests, children and disasters, lightning and tornado safety.

Town staff has attended classes on emergency management. All key personnel have been trained in ICS.

- Village of Tequesta

The Village has recently completed construction of a Public Safety Building that contains a state of the art Emergency Operations Center that is compatible with the Palm Beach County Emergency Operations Center. The Village's EOC has a concrete hardened hurricane rated shelter that has a secondary generator and is shuttered and provides alternative power supply for the EOC. The EOC also has communications and backup communications systems.

The Village's Building Code, has been updated to comply with the Florida Building Code, as is mandated by the state of Florida. In addition, the Code requires sprinkler systems in new commercial and multi-family (3 or more units) structures, as well as in single family homes over 10,000 square feet. The town has amended the code to include requirements for uses using liquid fuel. They reflect the standards recommended by the National Fire Protection Association. The Fire Department complies with all National Fire Protection Association regulations.

Besides the building code, other pertinent village ordinances address: coastal construction, dune removal or alteration, and flood damage prevention. The coastal construction code provides for more stringent

building standards in the coastal building zone, the land area between the seasonal high water line of the Atlantic Ocean and the waters of the Intracoastal Waterway.

Village of Tequesta has addressed hazards in its Comprehensive Plan. In addition, the village has prepared and adopted a Floodplain Management Plan, which qualified to be in the NFIP, qualifying the residents of the town to receive reduced flood insurance premiums. Reductions in the NFIP premiums have been achieved, because the town actively participates in the CRS program. The Village of Tequesta has a CRS rating of 7, which enables their residents to realize a 15% reduction in their NFIP rates.

The village has a Storm Emergency Response Plan that outlines the activities it will undertake in the event of an approaching hurricane or tropical storm. Staff involved with emergency management and building inspection are provided several opportunities each year to attend seminars and conferences to advance their skills and knowledge regarding natural and technological hazards.

The Village has a Storm Drainage Regulation Ordinance. It requires all new development to provide adequate drainage for a 25 year frequency, 24-hour duration. Also, the village has established a set of maintenance operating procedures for its storm water drainage system.

The Village of Tequesta has an established Outreach Program. It contains information about flooding and hurricane preparedness tips.

The Village's building code requires brace gable and roof framing; trusses manufactured in accordance with local wind models, and finished floor elevations to be 18 inches above the crown of the road and 8.5 feet above mean sea level. The city code also requires impact resistance or glazing for building openings.

Being in the NFIP has allowed the city the opportunity to participate in the CRS. This CRS involvement directly relates to reduced homeowner flood insurance rates. Delray, with a CRS rating of 9, enables their residents to realize a 5% reduction in their NFIP rates.

The Village requires a storm water drainage plan for all new construction. Also, the city administers an on-going storm water inspection and maintenance program, removes debris from catch basins, as needed, and annually trims trees.

- Village of Wellington

The Village of Wellington has over 80 miles of canals and 250+ acres of lakes. The Village also has six (6) pump stations in place to assist in the moving of surface water. Procedures are in place to ensure that all canals, drainage structures and pump stations are maintained

The Village of Wellington has been very active in its mitigation efforts. In the late 1990's, the Village of Wellington received a Hazard Mitigation grant from the State of Florida to improve the drainage in a subdivision of Wellington. The project entailed culvert improvements, easement improvements, elevating a road and pump station improvements at a total cost of approximately \$750,000.

The Village of Wellington also received a grant to assist in the construction of the Villages' EOC. This grant was obtained in 2000.

In addition, the Village of Wellington is currently shuttering the Wellington Community Complex, which serves as the Council Chambers and is the hub of the community activity. It also serves as a Red Cross Recovery site. A grant was also obtained for this project.

The Village of Wellington participates in the National Flood Insurance Program and consequently is in the Community Rating System program. It currently has a rating of 9, which allows its residents to receive a 5% reduction in their flood insurance premiums. The Village started participating last year and plans on lowering the rating as a result of some planned activities.

The Village recently adopted an ordinance titled "Operation and Maintenance Responsibilities for Storm water Systems. The ordinance provides regulations for the operation and maintenance of water management systems within the Village of Wellington.

The Village of Wellington has an active volunteer base that assists the Village in preparing the EOC for activation. Emergency drills are held periodically. Staff is sent to various training conferences and classes.

- City of West Palm Beach

The City of West Palm Beach has retrofitted a number of facilities to make them disaster resistant. These facilities include all Fire Rescue Stations with door bracing and window protection, the Police Station with window protection, City Hall and Recreational facilities with window protection and door bracing.

The City has installed an Emergency Alerting and Notification Phone System in order to pass information quickly to employees and citizens of West Palm Beach.

The City's Building Code has been updated by adopting the 1997 Edition of the Standard Building Code. The building code includes key hazard-specific provisions. The city's building code requires brace gable and roof framing; trusses manufactured in accordance with local wind models, and finished floor elevations to be 18 inches above the minimum 100-year flood level. Also, the city recently incorporated an exterior glazed opening requirement to provide for hurricane missile impact protection. The City's

Code also reflects the standards recommended by the National Fire Protection Association.

The city requires a storm water drainage plan for all new construction. Also, the city administers an on-going storm water inspection and maintenance program, removes debris from waterways, as needed.

Flooding concerns have been addressed in its flood damage prevention and floodplain management regulations. They include provisions such as anchoring to prevent flotation, collapse or lateral movement of structures, as well as requiring steps be taken to afford protection of electrical and generating, heating, ventilation and air conditioning equipment from flooding.

The City opened a new Fire Station in the south end of the City in 2003. New stations are scheduled in the near future for the north end and western communities.

The City increased Storm water Rates this year to fund future Storm water Projects. This rate increase is expected to raise 26 million dollars. A Bond Issue is scheduled for July, 2004.

Being in the National Flood Insurance Program (NFIP) has allowed the city the opportunity to participate in the Community Rating System (CRS). CRS involvement directly relates to reduced homeowner flood insurance rates. West Palm Beach has a CRS rating of 7. This enables city residents to realize a 15% reduction in their NFIP rates.

The City's Comprehensive Plan is upgraded at least yearly.

West Palm Beach employs a full-time Emergency Management Coordinator (one of only a handful full-time municipal emergency managers in the State). The Coordinator has developed a 24/7 Emergency Operations Center, a City Warning Point, numerous All-Hazard Plans, vulnerability studies and assessments, Recovery Plans, Debris Management Plans, and a new Comprehensive Emergency Management Plan (March, 2004) that thoroughly coordinates city efforts and responsibilities and integrates the County CEMP, where needed, with the City Plan. The CEMP has been approved by the City Mayor and Commission,

The Emergency Manager distributes hurricane preparedness pamphlets, and does presentations to city employees, public and private groups.

The Fire Rescue and Police departments have developed a robust Citizen Corps and Community Emergency Response Team (CERT) Program and conducts citizen training classes on Emergency Response Training to residents, employees, and special groups. Over 400 persons have graduated from these classes in 2003-2004.

City staff from Municipal Services, Fire-Rescue Services, Development Services, Recreation Services, Police Services, and Utility have attended

classes, seminars and conferences pertaining to emergency management and/or other mitigation issues. Building inspectors have taken courses on: retrofitting and floor mitigation, hurricane-resistant structural design, roofing updates, wood construction and fire resistance.

Staff involved with emergency management issues and building inspection are provided several opportunities each year to attend seminars and conferences to advance their skills and knowledge regarding natural and technological hazards. Emergency drills and training include structural fires, hurricanes, excessive rain, flooding, tornadoes, chemical spills, and terrorist response training.

Appendix B-3: Inter-Governmental Coordination

Coordination among the numerous governmental entities of Palm Beach County is essential for meeting the needs of Palm Beach County residents, particularly as it relates to issues involving life and property. The County, its 38 municipalities, the South Florida Water Management District, more than a dozen secondary drainage districts, the School Board, regional and state agencies, authorities and taxing districts are among the long list of key players who make direct or indirect decisions that impact on residents, visitors, the economy and quality of life. The LMS seeks to develop and maintain close working relationships with these agencies.

Guidance on how intergovernmental coordination will be conducted and managed is contained in the Intergovernmental Coordination Element of the County's Comprehensive Plan. Goal 1 Objectives 1.1 through 1.5 of the Intergovernmental Coordination Element state that it is the goal of Palm Beach County to provide a continuous coordination effort with all affected governmental entities in order to accomplish the goals of the Palm Beach County Comprehensive Plan and to consider recommendations of affected governmental entities in the County's decision-making process and to ensure consistency with state and regional plans. Objective 1.3 states that intergovernmental coordination strategies will be used to satisfy special planning needs and to further the goals, objectives and policies of the Palm Beach County Comprehensive Plan that would be advanced by intergovernmental cooperation.

The LMS conforms with and applies the principles and guidance offered by the Comprehensive Plan to ensure that the Unified LMS plan considers, is consistent with, and is supportive of the County's Comprehensive Plan, the related plans of all municipalities and other governmental entities, and with regional, state and federal plans and requirements. The LMS also ensures that the Unified LMS is consistent with and supports the county and municipal comprehensive emergency management plans, post-disaster redevelopment plans and other plans.

Appendix B-4: Private Sector Coordination

The LMS works closely with member and non-member business and NGO organizations on a range of initiatives to create a more disaster resilient community and economy. Key mechanisms for this inter-sector coordination are the LMS, the Executive Committee of the Post Disaster Redevelopment program, the ESF 18 (Business & Industry Emergency Support Function) and the Private-Public Partnership. In its third year of existence, the Private-Public Partnership has identified 31 mitigation related initiatives to pursue. Three of these initiatives, The Business Continuity Information Network (BCIN), Florida First (a banking consortium to ensure the continuity of banking services after disasters) and a private sector-driven program dubbed “First Responders First” are well along in development as of this writing.