

SECTION 4: INVENTORY AND EVALUATION OF EXISTING HAZARD MANAGEMENT GOALS, POLICIES, PROCEDURES, ORDINANCES, PROJECTS, AND ACTIVITIES

4.1 GOVERNMENTAL

4.1.1 Federal

From the federal perspective, the National Mitigation Strategy is its most important hazard mitigation initiative due to the comprehensive nature of the effort. It has been developed to provide a framework for reducing the exposure of all Americans to the catastrophic losses caused by natural disasters. Federal mitigation action planning is directed toward protecting U.S. citizens by:

- Utilizing the scientific and technical knowledge resulting from the research efforts of the National Institute of Standards and Technology (NIST), and integrating it into local fire and building codes in order to reduce major urban fires and building failures;
- Establishing under the NFIP a national program for floodplain management with strong mitigation provisions to significantly reduce flood losses;
- Developing a national system of emergency management with a coordinated Federal Response Plan to replace the piecemeal approach to recovery only after disaster strikes;
- Establishing a National Earthquake Hazards Reduction Program to increase the availability of applied seismic research, develop state seismic hazard reduction programs, and improve training and education on methods to the risk of loss of life and property to earthquakes;
- Establishing a National Hurricane Program to minimize loss of life and property from hurricanes through better property protection, warning and evacuation procedures, and training and education;
- Developing a National Inventory of Dams identifying high-hazard dams and encouraging the development of warning systems and emergency plans for many of these facilities;
- Establishing an effective program of assistance to state and local governments for post-disaster mitigation actions through the Stafford Act's Section 404, Hazard Mitigation Grant Program, and under Section 406 in terms of the mitigation of damage to public facilities; and
- Establishing a nationwide program of federal, state, and local preparedness consisting of trained personnel, facilities, equipment, training, and exercises to save lives and protect property through warning, evacuation, shelter, and other post-disaster actions.

In addition to natural disasters, at the federal level considerable attention has been focused on the release of hazardous materials. In 1986, the United States Congress enacted the Emergency Planning and Community Right-to-Know Act. It imposed upon state and local

governments planning and preparedness requirements for emergencies involving the release of hazardous materials.

The role of the federal government in response to an emergency involving the release of hazardous materials is to support local and state emergency operations. Activation of the federal Regional Response Team (RRT) provides access to federal resources not available at the state and local levels. An on-scene coordinator is designated to manage federal resources and support.

The national warning and communications center for emergencies involving the release of hazardous materials. It is manned 24 hours a day, and is located at the U.S. Coast Guard headquarters in Washington, D.C.

4.1.2 State

While many state agencies have significant roles in disaster response and mitigation, the Florida Department of Community Affairs (FDCA) has primary responsibility. Several years ago, the FDCA developed the Florida Hazard Mitigation Strategy (FHMS). Its purpose is to establish a comprehensive program for the FDCA to effectively and efficiently mobilize and coordinate the state's services and resources to make Florida's communities more resistant to the human and economic impacts of disasters. The Strategy achieves this purpose by the following actions:

- Improving the understanding and awareness of the natural, technological, and societal hazards faced by the people, property, businesses, and institutions within the State of Florida;
- Defining the goals, objectives and priorities of the FDCA for hazard mitigation and post-disaster redevelopment in Florida;
- Developing and implementing programs to promote hazard mitigation throughout the state;
- Enhancing programs among state agencies and local governments to more effectively guide post-disaster redevelopment to minimize community vulnerability to future disasters;
- Increasing the identification of mitigation opportunities and maximizing the utilization of available funding;
- Improving coordination of programs within the FDCA related to hazard mitigation and post-disaster redevelopment;
- Facilitating coordination between the FDCA and other federal, state, regional, local and private sector programs related to hazard mitigation and post-disaster redevelopment;
- Describing clearly the State of Florida's hazards mitigation program-implementation tasks and establishing schedules for their completion;

- Designating who is responsible for the development and implementation of hazard mitigation and post-disaster redevelopment programs;
- Encouraging public participation and involvement in the development and implementation of the strategy; and
- Identifying and prioritizing hazard mitigation and redevelopment initiatives, programs, and projects prior to a disaster.

The FHMS provides the FDCA with operational and programmatic guidance to promote the goals and objectives of the nationally based National Mitigation Strategy as coordinated by FEMA.

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The FDCA has the lead role in coordinating state resources to support local government unless the scope of the emergency warrants a higher degree of state involvement. This may occur when emergencies involve multi-jurisdictional hazards, when local governments believe the emergency is beyond the capabilities of local resources, or when the Governor determines there is an overriding concern for the safety of the public. For these situations, the Governor can designate the primary responsibility for emergency response to the state by issuing an Executive Order under the provisions of Section 252.36, Florida Statutes (F.S.).

The DEM is the designated State Warning Point in the event of a hazardous materials incident. As such, the DEM is responsible for receiving notification of an emergency from the county Communications Coordinator, and coordinating the request(s) for county support, if requested. The DEM is responsible for assisting LEPCs in providing warnings and instructions to the general public.

Over the past several years, extensive damage has resulted from wildfire. The Florida Division of Forestry (DOF) has major responsibility for protecting forest lands and the public from the effects of wildfire. Local fire-rescue departments have primary responsibility for structural fires. They also are the first responders to all fires. If the local fire-rescue department has determined that the wildfire event is beyond its capacity to fight, the local fire-rescue department can request assistance from the DOF. When that occurs, an incident command control is established with state and local fire-rescue departments working together to extinguish the wildfire.

4.1.3 Regional

4.1.3.1 Treasure Coast Regional Planning Council

The TCRPC was created under Section 186.501, F.S. The council is multi-county entity encompassing Indian River, Martin, Palm Beach, and St. Lucie Counties. It has responsibility for addressing growth management issues that are multi-jurisdictional in scope. This includes working in cooperation with federal and state agencies planning for emergency management issues as described in Section 252.34(4) F.S. The TCRPC provides full-time staffing for the District X LEPC. The LEPC is charged with administering regional compliance with hazardous

materials reporting and training laws. Its many initiatives include the State Hazardous Materials Training Task Force; District X Hazardous Materials Emergency Plan; training for emergency first response personnel; hospital and hazardous materials response team needs; public hazardous chemical awareness and reporting seminars; public and private sector hazardous materials emergency exercises; and assisting public and private facilities with chemical emergency preparedness planning.

Section 186.507, F.S. directs regional planning councils to prepare strategic regional policy plans. One of the elements that the plan must address is emergency preparedness. The TCRPC promotes mitigation initiatives within Section 5.0, Emergency Preparedness, of its “Strategic Regional Policy Plan”. Specific strategies that promote mitigation are summarized below. These strategies and the policies that implement them are listed in the Inventory of Existing Hazard Management Goals, Strategies, and Policies Matrix (**Appendix D**).

- **Strategy 5.1.1** Direct development away from areas most vulnerable to the effects of natural and manmade disasters.
- **Strategy 5.2.1** Utilize land use, transportation, and community planning processes to address vulnerability issues.
- **Strategy 5.3.1** Provide shelter space for residents of areas susceptible to flooding from the effects of hurricanes and other storms.
- **Strategy 5.4.1** Develop the mechanisms necessary to ensure that emergency planning agencies have in-put into the local government decision-making process.
- **Strategy 5.5.1** Initiate disaster preparedness activities which will protect lives and property and reduce evacuation times.
- **Strategy 5.5.2** Establish mechanisms and regulations necessary for post-disaster reconstruction to occur in a consistent manor making future disasters less destructive to life and property.

4.1.3.2 South Florida Water Management District

The creation of the South Florida Water Management District (SFWMD) along with the four other water management districts were enabled under Section 373.069, F.S. As required under Section 373.036(2), F.S., each district has prepared a district water management plan. The plan provides the overarching vision for the districts. The key elements of the plans are:

- Environmental protection and enhancement;
- Water supply;
- Flood protection; and
- Water quality protection.

One of the purposes of the plan is to provide a framework to address issues of water conservation, extreme drought and flooding. The SFWMD administers several programs that

achieve hazard mitigation relative to flooding, hurricanes, and drought. Historically, water management districts were created primarily to mitigate the impacts of flooding. Over the years, the districts' roles have been expanded considerably.

The SFWMD operates and maintains the regional drainage system throughout its jurisdictional area. Local drainage systems are operated by a variety of special districts, private property owners, and local governments. The local systems typically convey water from individual projects to the regional system. The SFWMD's responsibilities for flood protection relate primarily to serving as the regional water conveyance and storage entity. To meet this responsibility the SFWMD maintains an ongoing "Canal Conveyance Capacity" evaluation program. The objectives of the program are:

- To implement a systematic approach to the inspection of all SFWMD canals to Determine the need for periodic dredging;
- To inspect all canals over a five year period;
- To establish standard canal survey criteria; and
- To develop construction plans and specifications to implement restoration of conveyance to the canals.

In addition to private applicants, local units of government involved in building new stormwater systems or retrofitting older ones are required to petition the SFWMD for a surface water management permit approval.

Besides flood control, the SFWMD is responsibility for protecting existing water resources from excessive drawdown during periods of drought, and protecting wellfields from contamination. Also, the District administers the "Save Our Rivers" program for the purpose of protecting environmentally sensitive lands. Some of the lands purchased under the program have been situated in the Coastal High Hazard Area (CHHA); thus, in addition to achieving the program's primary goal - the protection of environmentally sensitive resources - the intensity and density of development in CHHAs is reduced.

4.1.4 Local

4.1.4.1 Palm Beach County

Palm Beach County occupies approximately 1,993 square miles on Florida's southeastern Atlantic coast. It is the second largest county in the state in terms of land area. It has approximately 44 miles of coastal shoreline that fronts the Atlantic Ocean. In addition to the Atlantic Ocean to its east, the county is bounded by Martin County on the north, Broward County on the south, and Lake Okeechobee and Hendry County to the west.

Palm Beach County is the fifth most populated county in the state. In 2000, the countywide population topped the one million mark at 1,131,184 (U.S. Census). It is projected that by the year 2020, the population will increase nearly 60 percent, to 1,597,535. The majority of the growth is expected between the coastal ridge and Water Conservation Areas.

Thirty-eight municipalities exist in the county. In terms of population, they vary significantly. The City of West Palm Beach is the largest (105,068) while the Town of Cloud Lake (176) is the smallest (see **Table 4.1**). There are three urban centers of population along the coast: in south Palm Beach County, the Boca Raton/Delray Beach/Boynton Beach area (combined population – 216,528); the West Palm Beach/Lake Worth/Riviera Beach area (combined population – 180,218) in central Palm Beach County; and in north Palm Beach County, the Palm Beach Gardens/Jupiter area (combined population – 97,650). Two other centers of population exist in the county. One is the Glades agricultural communities of Belle Glade, Pahokee, and South Bay that border on Lake Okeechobee, (combined population – 24,988). This area has unique needs because of its relative physical isolation from the highly urban area along the Atlantic coast. The other area, rapidly urbanizing, is the Royal Palm Beach/Wellington/Greenacres City (combined population – 117,364) area. Based on projected population, the City of Palm Beach Gardens is expected to experience the largest population increase among the municipalities in Palm Beach County by the year 2020.

As growth has occurred, and the county has become more and more urbanized, large portions of the county have experienced shifting land use patterns, moving from rural, agricultural areas to emerging residential communities, industrial and business employment centers. Land in Palm Beach County is used for three major purposes: urban uses, agriculture, and protecting environmentally sensitive resource areas (e.g., water conservation areas, Corbett Wildlife Refuge, beach areas). **Table 4.2** provides a synopsis of each municipality.

From a hazards perspective, transportation is an important component shaping the overall development pattern. Being a major urban county, the residents and businesses are serviced by many suppliers that depend upon the air, rail, and trucking industries that distribute goods throughout the region. Key major modes of transportation traverse throughout Palm Beach County. The area is served by major transportation corridors (e.g., Interstate 95, Florida Turnpike), three rail lines (Florida East Coast Railroad, CSX Railroad and Tri-Rail), the Port of Palm Beach, and Palm Beach International Airport. As the area becomes more urban and more congested, the potential for transportation accidents will increase.

Within Palm Beach County, the SFWMD operates six major drainage canals: C-18, C-17 (Earman River), C-51 (West Palm Beach Canal), C-16 (Boynton Canal), C-15 (drains 75 square miles in southeastern Palm Beach County), and the Hillsboro Canal. Secondary stormwater drainage canals drain into these regional conveyance system drains. Prior to the construction of the extensive SFWMD canal system, flooding was a common occurrence, and served as a limiting factor to growth. In addition to providing drainage relief, the regional drainage facilities also benefit the area's water resources. Eastern Palm Beach County generally relies upon local rainfall and water stored in the Water Conservation Areas for its water. The regional SFWMD system can move water from Lake Okeechobee, through the Water Conservation Areas, and then to eastern Palm Beach County where the water helps supplement local recharge of urban wellfields. Palm Beach County's connection to the SFWMD regional system makes it less vulnerable to drought conditions than if it depended solely on local supplies. The south county wellfields would be seriously impacted by the loss of recharge from surface water systems.

It is the goal of Palm Beach County to protect human life and property by limiting public expenditures in areas subject to destruction by natural disasters (especially within the coastal high hazard area), maintaining and implementing an effective emergency management program, and providing for orderly recovery and redevelopment in a post-disaster period.

Toward this end, the county and its 38 municipalities maintain a series of coordinated, interlinked preparedness and recovery plans including, but not limited to:

Comprehensive Plans at County and municipal levels which focus on environmental resources management, managed avoidance of development in high hazard areas, and responsible post disaster redevelopment;

Comprehensive Emergency Management Plan, which establishes the framework to ensure that Palm Beach County will be adequately prepared to deal with the hazards threatening the lives and property of county citizens and details pre and post-disaster hazard mitigation strategies, policies and activities;

Unified Local Mitigation Strategy Plan, which describes county-wide strategies and projects for mitigating the effects of identified vulnerabilities to natural, technological and societal hazards;

Continuity of Operations Plan, which ensures the continuance of essential governmental functions during any emergency or situation that might otherwise disrupt normal operations.

Through the Planning Subcommittee of the Local Mitigation Strategy, these and other plans relevant to the protection of life and property are closely monitored in an effort to ensure their language, policies, procedures and practices are compatible, consistent, coordinated, and mutually beneficial.

Palm Beach County and its 38 municipalities participate in a full complement of federal state and local mitigation programs and initiatives. Representative of these programs and initiatives are the Local Mitigation Strategy, Community Rating System, National Flood Insurance Program, Flood Mitigation Assistance Program, CERT, Continuity of Operations, Businesses Addressing Readiness & Recovery program, counter-terrorism and radiological emergency preparedness initiatives, hazardous materials. The collective purpose of these activities is the elimination or mitigation of hazards presenting significant risk to the county and its residents.

Palm Beach County's Unified Local Mitigation Strategy, and its companion mitigation programs (e.g. Community Rating System program, Flood Mitigation Assistance program, and National Flood Insurance Program) are detailed below.

Table 4.1. Population growth in Palm Beach County.

City	1980 Census Data	1990 Census Data	2000 Census Data	Increase/ Decrease (1990-2000)	2010 (Estimated)	Increase/ Decrease (2000-2010) (Estimated)	2020 (Estimated)
Atlantis	1,325	1,653	2,005	352	2,166	184	2,189
Belle Glade	16,535	16,177	14,906	-1271	15,499	593	17,812
Boca Raton	49,447	61,492	74,764	13,272	85,296	10,532	86,749
Boynton Beach	35,624	46,194	60,389	14,195	66,952	6,563	72,918
Briny Breezes	387	400	411	11	518	107	1,000
Cloud Lake	160	121	167	46	181	14	186
Delray Beach	34,329	47,181	60,020	12,839	65,781	5,761	77,097
Glen Ridge	235	207	276	69	322	46	328
Golf Village	110	234	230	-4	238	8	301
Greenacres	8,780	18,683	27,569	8,886	32,688	5,119	35,926
Gulfstream	475	690	716	26	826	110	921
Haverhill	1,249	1,058	1,454	396	1,556	102	1,640
Highland Beach	2,030	3,029	3,775	746	4,188	413	5,132
Hypoluxo	573	830	2,015	1,185	2,828	813	2,890
Juno Beach	1,142	2,121	3,262	1,141	3,704	442	3,853
Jupiter	9,868	24,986	39,328	14,342	58,825	19,497	63,785
Jupiter Inlet Colony	378	405	368	-37	401	33	407
Lake Clark Shores	3,174	3,364	3,451	87	3,557	106	3,595
Lake Park	6,909	6,704	8,721	2,017	8,885	164	9,735
Lake Worth	27,048	28,564	35,133	6,569	37,328	2,195	38,766
Lantana	8,048	8,392	9,437	1,045	10,000	653	11,079
Loxahatchee Groves	--	--	--	--	3,000	--	
Manalapan	329	312	321	9	380	59	387
Mangonia Park	1,419	1,453	1,283	-170	1,488	205	1,526
North Palm Beach	11,344	11,343	12,064	721	12,753	689	13,000
Ocean Ridge	1,355	1,570	1,636	66	1,851	215	1,913
Pahokee	6,346	6,822	5,985	-837	6,357	372	9,192
Palm Beach	9,729	9,814	9,676	-138	11,041	1,365	11,343
Palm Beach	14,407	22,965	35,058	12,093	52,694	17,636	68,488

City	1980 Census Data	1990 Census Data	2000 Census Data	Increase/ Decrease (1990-2000)	2010 (Estimated)	Increase/ Decrease (2000-2010) (Estimated)	2020 (Estimated)
Gardens							
Palm Springs	8,166	9,763	11,699	1,936	16,781	5,082	18,062
Riviera Beach	26,489	27,639	29,884	2,245	40,345	10,461	54,223
Royal Palm Beach	3,423	14,589	21,523	6,934	32,000	10,477	36,000
South Bay	3,886	3,558	3,859	301	4,172	313	5,173
South Palm Beach	1,304	1,480	1,531	51	716	-815	1,550
Tequesta	3,685	4,499	5,273	774	5,900	627	6,500
Wellington	--	--	38,216	--	56,183	17,967	62,061
West Palm Beach	63,305	67,643	82,103	14,460	104,270	22,167	112,269
Unincorporated Area	212,303	406,210	521,447	115,237	715,749	194,302	819,992
County Total	576,758	863,518	1,131,184	267,666	1,467,519	334,577	1,657,890
% Population Change County Wide		Increase from 1990 to 2000 = +31%			Increase from 2000 to 2010 = +23% (estimated)		

Table 4.2. Community characteristics within Palm Beach County.

Municipality	Location	Urban/Rural	Community Character (Residential/Working /Retirement)	Percent Built Out	Source Year	Economic Base (Agricultural/Business/Industrial/ Residential/Retirement)
Atlantis	Inland	Urban	Residential	NI		Residential/Retirement
Belle Glade	Lakefront	Rural	Working	75	89	Agricultural
Boca Raton	Coastal	Urban	Working	NI		Business
Boynton Beach	Coastal	Urban	Residential	NI		Residential/Commercial
Briny Breezes	Coastal	Urban	Retirement	100	89	Retirement
Cloud Lake	Inland	Urban	Residential	94	89	Retirement/Residential
Delray Beach	Coastal	Urban	Residential/Working	98.9	08	Business
Glen Ridge	Inland	Urban	Residential	86.3	89	Residential/Commercial
Golf	Inland	Urban	Residential	NI		Residential
Greenacres	Inland	Urban	Residential	97	06	Residential/Commercial
Gulfstream	Coastal	Urban	Residential	NI		Residential
Haverhill	Inland	Rural/Urban	Residential	96	89	Residential/Commercial
Highland Beach	Coastal	Urban	Residential/ Retirement	98	08	Residential/Retirement
Hypoluxo	Coastal	Urban	Residential	NI		Retirement
Juno Beach	Coastal	Urban	Residential	90	98	Residential/Commercial
Jupiter	Coastal	Urban	Residential/Working	90	06	Business
Jupiter Inlet Colony	Coastal	Urban	Residential	99	08	Residential/Retirement
Lake Clark Shores	Inland	Urban	Residential	96	89	Residential/Commercial
Lake Park	Coastal	Urban	Working	95	08	Business
Lake Worth	Coastal	Urban	Residential	NI		Commercial
Lantana	Coastal	Urban	Residential	NI		Residential/Commercial
Loxahatchee Groves	Inland	Rural	Residential	NI	09	Residential
Manalapan	Coastal	Urban	Residential	NI		Residential
Mangonia Park	Inland	Urban	Working	NI	89	Business/Industrial
North Palm Beach	Coastal	Urban	Residential	98	89	Residential/Commercial
Ocean Ridge	Coastal	Urban	Residential	NI		Residential/Retirement
Pahokee	Lakefront	Rural	Working	NI		Agricultural

Municipality	Location	Urban/Rural	Community Character (Residential/Working /Retirement)	Percent Built Out	Source Year	Economic Base (Agricultural/Business/Industrial/ Residential/Retirement)
Palm Beach	Coastal	Urban	Residential	97	97	Residential/Commercial
Palm Beach Gardens	Coastal	Urban/Rural	Residential/Working	NI		Agricultural/Business
Palm Beach Shores	Coastal	Urban	Residential	NI		Residential/Retirement
Palm Springs	Inland	Urban	Residential	96	89	Residential/Commercial
Riviera Beach	Coastal	Urban	Working	94		Industrial
Royal Palm Beach	Inland	Urban	Residential	90		Business/Industrial
South Bay	Inland	Rural	Residential/Working	91	89	Agricultural/Industrial
South Palm Beach	Coastal	Urban	Residential	100	89	Residential/Retirement
Tequesta	Coastal	Urban	Residential	95	89	Residential/Retirement
Wellington	Inland	Urban	Residential	NI		Residential
West Palm Beach	Coastal	Urban	Residential	NI		Business

Listing of County Agencies

Within the existing county organizational structure, there are a number of departments that play key roles in hazard mitigation. They include: Department of Public Services - Emergency Management Division, Department of Planning, Zoning and Building Development, and the Department of Environmental Resource Management.

Public Safety Department (PSD). The PSD is composed of six sections: Division of Emergency Management (DEM), Animal Care & Control Division, Consumer Affairs Division, Medical Examiner's Office, Victim Services & Support, and the Youth Affairs Division. During emergency events (e.g., hurricanes), the DEM has the lead role in coordinating the resources and key agencies, non-profits, and private sector entities involved in the emergency situation. In addition, the Board of County Commissioners has assigned the DEM with a new responsibility, being lead agency in the development of the county's Local Mitigation Strategy.

Department of Planning, Zoning & Building (PZ&B). The PZ&B is comprised of three divisions: Planning, Zoning and Building. The PZ&B has primary responsibility for administering the Palm Beach County Comprehensive Plan, and appraising and updating it from time to time. In addition to its long-range planning role, PZ&B is responsible for processing development petitions (i.e., rezoning petitions, site plans). The Building Division issues and oversees compliance with all building permits. The Zoning Division administers the Zoning Ordinance and Lot Clearing Ordinance. The County also issues building permits for one municipality Gulf Stream.

Department of Environmental Resource Management (ERM). The ERM is involved in the evaluation and assessment of environmental projects (e.g., shoreline stabilization projects, beach erosion initiatives), and administering various environmental ordinances (i.e., Irrigation & Water Conservation, Sea Turtle Protection/Sand Preservation Ordinance, Stormwater Pollution Prevention, Vegetation Protection and Preservation, Turnpike Wellfield Protection). To mitigate erosion and enhance and restore the beaches and dunes along its coastal shorelines, the County has developed a Shoreline Protection Plan. The County avoids the use of shoreline armoring (except as a measure of last resort). Preferred alternatives include beach nourishment, dune restoration, and inlet sand transfer.

Department of Facilities Development and Operation. This department is responsible for the development of county buildings including siting, real estate, design and construction, and operations of the facilities. The Department is responsible for overseeing the construction of capital projects as well as the long-term maintenance of county facilities (e.g., emergency management operations center).

Department of Engineering and Public Works (DEPW). The DEPW is responsible for project design and construction of roads and bridges and street improvements (includes stormwater drainage facilities), and vehicular and pedestrian traffic control, as well as the maintenance of the facilities.

Fire-Rescue Department. The County Fire-Rescue Department provides fire suppression, emergency medical services, fire prevention and community education programs throughout Palm Beach County. The department not only serves the unincorporated county, but many municipalities. They include: Belle Glade, Cloud Lake, Glen Ridge, Haverhill, Juno Beach, Jupiter, Lake Clarke Shores, Lake Park, Lantana, Manalapan, Pahokee, Royal Palm Beach, South Bay, South Palm Beach and Wellington. The County also has a joint venture agreement

with Pahokee and Canal Point. The County also provides fire-rescue dispatch service to Jupiter Inlet Colony, Lake Worth, Mangonia Park, North Palm Beach, Palm Beach Gardens, Palm Springs, Tequesta, and West Palm Beach.

Besides emergency services, the Department provides other types of services. The Bureau of Safety Services is responsible for ensuring that buildings comply with appropriate fire codes. The department also offers public education programs which focus on fire safety guidelines for schools, community groups, and individuals. In addition, the department has responsibility for coordination of fire protection, hazardous materials mitigation, and advance life support services.

Sheriff's Department. Besides their responsibilities for crowd and traffic control during emergency events such as hazardous waste truck spills, the Sheriff's Department is responsible for enforcing the county's dumping ordinance.

Mitigation Policies and Ordinances

Policy Plans. The two key policy plans that address issues related to natural and technological hazards include: the County Comprehensive Plan and the County Comprehensive Emergency Management Plan. They are described, briefly below.

- County Comprehensive Plan

The Comprehensive Plan serves not only as a blueprint for Palm Beach County's future, but also as the County's policy document. It defines county positions as they relate to development and redevelopment. The Comprehensive Plan contains the nine required plan elements, as set out in Section 163.3161, F.S. They include: Conservation, Coastal Management, Infrastructure (i.e., potable water, sanitary sewer, stormwater management, solid waste, natural aquifer recharge), Future Land Use, Housing, Recreation and Open Space, Transportation, Intergovernmental Coordination, and Capital Improvement. In addition, the county has added several optional elements to the Comprehensive Plan. These address: Aviation, Fire-Rescue Services, Health and Human Services. The issue of hazards is dealt with in 9 of 13 plan elements. A complete listing of all hazard mitigation relevant goals, objectives, and policies by plan element for Palm Beach County and jurisdictional Comprehensive Plan are located in **Appendix D**.

Natural hazards, primarily flooding, hurricanes, drought, and beach erosion are the focus of the Comprehensive Plan. Technological-type hazards such as aquifer contamination and wellfield contamination are addressed in several elements. The Future Land Use Element prohibits increases in density in the Coastal High Hazard Area (CHHA). The Comprehensive Plan contains a Fire-Rescue Services Element that establishes level of service criteria, promotes fire safety inspections and recognizes the importance of having staff continually trained in the most current methods of fire fighting. The Conservation Element focuses on policies related to protection of the shallow aquifer from contamination, as well as protection of areas around wellfields. Air quality is also addressed in the Conservation Element. While much of the focus of the Element is on reducing vehicle emissions, it is recommended that open burning of land to clear debris needs to be examined closely.

The County through its Coastal Management Element, establishes a public policy stating that the County will not subsidize new or expanded development in the coastal area. Further, it is the County's position that population concentrations be directed "away from known or predicted coastal high-hazard areas, and shall discourage increases in population densities that would reduce hurricane evacuation times." The Coastal Management Element also contains a discussion about emergency preparedness and the lead role of the Division of Emergency Management in directing and controlling activities during any disaster, including preparedness, response and recovery.

The Comprehensive Plan in the Potable Water Sub-element addresses issues related to drought. Water conservation through xeriscaping, requiring use of irrigation quality (I.Q.) reclaimed water for irrigation, and use of increasing block utility rate structures are priority issues for the county. The Potable Water Sub-element also has an objective of replacing smaller 4" water lines with 6" lines to achieve adequate fire flow. It is also a policy of the county to mitigate against droughts by reducing per capita water consumption. Finally, the flooding hazard is addressed primarily in the Stormwater Management Sub-element. The county has adopted the concept of Level of Protection, which is designed to:

Provide protection from flooding and inundation consistent with the severity of the potential threats to health, safety, welfare, and property;

Maintain stormwater runoff rates at levels compatible with safe conveyance capacities of receiving waters.

Effective October 25, 2002, Palm Beach County's Comprehensive Plan contains specific language which recognizes, concurs with, and links the county's LMS objectives, processes and project prioritization criteria with capital improvement and coastal management policies and priorities. Key references can be found in Policy 1.4 of the Capital Improvement Element; and **Section 2**, Objective 2.4 and Policies 2.4-e and 3.1-c of the Coastal Management Element. By virtue of their intended purpose to mitigate public hazards, projects carried on the LMS Prioritized Project List are considered to meet the county's standards for categorization as "Essential." The Comprehensive Plan also recognizes that the governing body of the Unified Local Mitigation Strategy program shall be comprised of representatives assigned by each of the 38 municipalities and Palm Beach County and be governed by appropriate policies, procedures and/or either interlocal agreements or resolutions.

- Palm Beach County Comprehensive Emergency Management Plan (CEMP)

The Board of County Commissioners has adopted a CEMP. It is an operations-oriented document that establishes the framework for effective management by the county during emergencies and disasters. The CEMP addresses a broad range of hazards. They include:

- Hurricanes & Tropical Storms
- Flooding

- Freezes
- Wildfires
- Tornadoes
- Droughts
- Property Loss/Agricultural Hazards
- Hazardous Materials
- Toxic Contamination of Water Supply
- Fixed Nuclear Power Facilities
- Coastal Oil Spill
- Dam Failure
- Terrorism
- Mass Immigration
- Mass Casualty
- Epidemics

The CEMP addresses evacuation in terms of local and regional evacuation, public shelter, post-disaster response and recovery, rapid deployment of resources, communications and warning systems, training exercises, and agency responsibilities. These responsibilities constitute Emergency Support Functions (ESF). See **Table 4.3**. Each ESF is headed by a lead agency which has been selected based on its authorities, resources, and capabilities in the functional area. The ESFs also serve as the primary mechanism through which outside assistance to Palm Beach County is coordinated.

In the Mitigation section of the CEMP, there is extensive language stating the objectives and details of the Local Mitigation Strategy. The mitigation techniques within the two plans include projects, policies, or programs which will reduce, eliminate, or alleviate damage caused by disasters. Moreover, the CEMP and the Local Mitigation Strategy work collectively to improve the community's resistance to damage from known natural, technological, and societal hazards.

Ordinances. Hazard-related ordinances are administered primarily by the PZB, ERM or Fire-Rescue. The list of relevant ordinances includes:

- Irrigation & Water Conservation
- Sea Turtle Protection/Sand Preservation
- Stormwater Pollution Prevention
- Countywide Wellfield Protection
- Turnpike Wellfield Protection
- Lot Clearing
- Zoning
- Building Code
- Fire Prevention Code
- Vegetation Protection and Preservation

Table 4.3. Emergency Support Functions and their designations.

Emergency Support Function	Designation
Transportation	ESF - 1
Communications	ESF - 2
Public Works and Engineering	ESF - 3
Firefighting	ESF - 4
Information and Planning	ESF - 5
Mass Care	ESF - 6
Resource Support	ESF - 7
Health and Medical Services	ESF - 8
Search and Rescue	ESF - 9
Hazardous Materials	ESF - 10
Food and Water	ESF - 11
Energy and Utilities	ESF - 12
Military Support	ESF - 13
Public Information	ESF - 14
Volunteers and Donations	ESF - 15
Law Enforcement and Security	ESF - 16
Animal Care	ESF - 17
Public Safety	ESF - 18

County Mitigation Plans, Programs Projects/Initiatives

There are a number of projects and initiatives the county has implemented to mitigate potential damage resulting from various hazards. Through Palm Beach County's 1991 \$100 Million Environmentally Sensitive Lands Acquisition General Obligation Bond Program, the county has purchased a number of important parcels in the CHHA. Most were purchased because they exhibited environmentally significant habitat; however, the county also gained by reducing the intensity and density of development in a high risk area, the CHHA.

Palm Beach County has also made a statement of the importance of hazard mitigation, by incorporating within its Comprehensive Growth Management Plan policy statements regarding the development of a county-wide Local Mitigation Strategy. In addition to its CEMP, there are special hazard plans that apply to unique situations. They address hazards such as coastal oil spills, hazardous materials, and airport safety. In addition, in a county that experiences substantial development each year, Fire-Rescue actively participates on the county development review committee. The Fire-Rescue staff reviews and comments on whether there is adequate access to buildings by both personnel and apparatus, and whether there is adequate vehicle ingress and egress.

The Fire-Rescue Department has a significant role relative to hazardous materials. Fire-Rescue staff pre-identifies hazardous chemical waste facilities and pre-plans emergency response. In addition, staff works with the facility managers by assisting in writing their emergency operations/evacuation plans.

Also, as many other counties have done since Hurricane Andrew, the county has upgraded its building code. It requires that all structures be able to withstand 110 mph wind load. The code now requires a finished floor elevation at 6 inches above minimum 100-year flood level. The county's building code also requires corrosion resistant hurricane clips, water resistant adhesives for shingles, and trusses manufactured in accordance with local wind models. Unlike many counties in Florida, Palm Beach County also requires shutters for all new single family homes, and glazing of exterior windows to achieve impact resistance from windborne debris.

Another mitigative activity of Fire-Rescue involves pre-planning for hurricanes. This involves identifying "target hazards." These are buildings/developments that are highly vulnerable to damage during a hurricane. In pre-storm stage, Fire-Rescue personnel identify residents that did NOT evacuate, and where they live in the event Fire-Rescue staff has to search for individuals following the storm event.

All fire stations have been fitted with shutters and have emergency generator and LP gas power sources. Also, all new facilities are being built to updated standards and have fire sprinkler/alarms.

National Flood Insurance Programs (NFIP)

The function of NFIP is to provide flood insurance to homes and businesses located in floodplains at a reasonable cost, and to encourage the location of new development away from the floodplain. The program is based upon mapping areas of flood risk, and requiring local implementation to reduce that risk, primarily through guidance of new development in floodplains.

Congress created the NFIP in 1968 to minimize response and recovery costs and to reduce the loss of life and damage to property caused by flooding. The Federal Emergency Management Agency (FEMA) administers the NFIP. The two fundamental objectives of NFIP are to:

1. Ensure that new buildings will be free from flood damage; and
2. Prevent new developments from increasing flood damage to existing properties.

The primary benefits of the NFIP are to:

1. Provide flood insurance coverage not generally available in the private market;
2. Stimulate local floodplain management to guide future development;
3. Emphasize less costly nonstructural flood control regulatory measures over structural measures; and
4. Reduce costs to the federal and state governments by shifting the burden from the general taxpayer to floodplain occupants.

Palm Beach County and its 38 municipalities participate in the National Flood Insurance Program (NFIP). In return for NFIP making flood insurance available to property owners, the county and municipalities are required to adopt ordinances to manage development within 100-year floodplains to prevent increased flooding and minimize future flood damage. Palm Beach County Flood Insurance Rate Maps published by the Federal Emergency Management Agency (FEMA) dating as far back as 1978, are used as the basis for delineating the 100-year floodplain and identifying regulated land. It is not uncommon to have adjacent areas with two different 100-year water levels due to wave run up.

The FIRM depicts the flood plain as determined by FEMA. Explanation of the various zones on the maps follows. **Appendix C** Flood Section has these zones mapped for Palm Beach County.

Explanation of Zone Designations

Zone	Explanation
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one square mile; or areas protected by levees from the base flood.
C	Areas of minimal flooding.
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.

V1-V30 Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

Flood Damage Prevention Ordinances

Palm Beach County's Flood Damage Prevention Ordinance, covering the unincorporated areas of the county, can be accessed through the Palm Beach County Planning, Zoning and Building Division's website. Municipal residents should contact their respective building department officials to determine what requirements are in effect for their jurisdictions. The ordinance has been revised and rewritten using the FEMA model. At this writing, the ordinance is being prepared for presentation to and approval by the Palm Beach County Board of County Commissioners.

Floodplain Permitting

The NFIP requires participating counties and municipalities to issue permits for all development in the 100-year floodplain. Development is broadly defined by NFIP to include any man-made change to land, including grading, filling, dredging, extraction, storage, subdivision of land, as well as the construction or improvement of structures. Proposed development must not increase flooding or create a dangerous situation during flooding, especially on neighboring properties. If a structure is involved, it must be constructed to minimize damage during flooding. Permitting officials work with applicants to discourage development in the floodplain wherever possible, but when unavoidable, the effects of development must be minimized.

The permitting review process is a requirement for continued community participation in the NFIP. Violations can not only jeopardize a community's standing in the NFIP; moreover, they can impact the ability of residents to obtain flood insurance. Residents witnessing development occurring without permits are asked to protect their rights by reporting violators to the local permit office.

Map Modernization Program

Palm Beach County is an active participant in the Map Modernization Program. Since September 2000, the county and the 37 municipalities have been working with FEMA, their contract consultants, local engineering agencies, the South Florida Water Management District (SFWMD) and the county's contract consultant in the development of a complete new set of Flood Insurance Rate Maps (FIRMs). The data being provided to FEMA's contractor includes new accurate LIDAR developed elevation data obtained from the U.S. Army Corps of Engineers and from a county contract with Florida International University.

At this writing, the new elevation data is available for as much as 60 percent of the county's topography and covers all our critical areas including our barrier islands, the intra-coastal areas, riverine areas, and the District's (SFWMD) flood control canal systems and their drainage basins. In addition, SFWMD has a contractor that is in the final stages of completing a hydraulic and hydrology study of the canal system and the sub-basins to establish the 100 year elevations within the system.

We anticipate the availability of a complete set of new FIRMs for all of Palm Beach County prior to October 2004. In addition, the coordination process established between all of the agencies listed above will provide for faster coordination of future changes with FEMA, to ensure continued improvement in the currency and accuracy of the FIRMs.

CRS

Since 1968, the Federal Emergency Management Agency (FEMA) has administered the National Flood Insurance Program (NFIP) which offers federally backed insurance money to communities that agree to adopt and enforce minimum standards for flood plain management to reduce future flood damage. In 1991, the NFIP implemented the Community Rating System (CRS) for encouraging and recognizing community flood plain management activities that “exceed” these minimum NFIP standards. Today more than 900 communities across the nation participate in CRS, including Palm Beach County and most of its municipalities. Palm Beach County joined the CRS program in October of 1991.

As an incentive and reward for participation, the flood insurance rates of residents in CRS communities may be reduced by up to 45% to reflect the reduced flood risk resulting from activities that meet CRS’s three goals: reducing flood losses, facilitating accurate insurance ratings, and promoting the awareness of flood insurance.

Communities can earn points in as many as 18 different creditable activity areas grouped into four areas of emphasis: promoting public awareness, reduction of flood damage, improved mapping and regulations; and enhanced flood preparedness. Based on the number of points earned, each CRS community is ranked in one of ten classes (with Class 1 requiring the most points). In turn, a community’s class rating determines the amount of flood premium reduction its residents are eligible to receive. Communities are encouraged to improve their class ratings. Property owners residing within a Special Flood Hazard Area, an area subject to the one percent chance a year, may qualify for anywhere between 5% and 45% discount. Property owners outside the Special Flood Hazard Area qualify for a standard discount of 5%. The county strongly encourages all of its communities to take part in the CRS program.

The county and its CRS participating municipalities track repetitive loss properties county-wide on an ongoing basis using information gathered annually from FEMA and state Focus reports. For analysis, LMS GIS maps and databases are updated using these inputs to reflect repetitive loss property locations relative to historical flood areas and designated Special Flood Hazard Areas.

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. Repetitive loss properties are an ongoing discussion and planning priority for the Mitigation Strategy Development and Flood Mitigation Advisory committees of the LMS. These committees, comprised of public and private sector representatives, are encouraged to develop and promote mitigation project ideas and strategies.

Table 4.4 outlines the communities involved in the CRS program. All the communities involved in the CRS program have program activities that follow the same strategies. Palm Beach County’s CRS program activities overlap and are inextricably interlinked with the activities of the unified LMS program. While the objectives of the CRS program are many, its key strategic objectives include:

1. Heightening public awareness of flood threats in the county
2. Discouraging/managing development in flood plains
3. Minimizing flood losses in the community
4. Mitigating to eliminate repetitive loss properties

5. Ensuring residents have access to the most cost affordable flood insurance possible

Some of these goals are met through the Education and Outreach Subcommittee formed during the development of the Palm Beach County Local Mitigation Strategy. This committee's purpose is to provide information to the community and involve the community in mitigation efforts. One major effort of this subcommittee has been to encourage countywide participation in the CRS program by providing technical assistance to communities wishing to enter the CRS program, and assisting those communities already participating in the CRS program to improve their CRS ratings. Most communities in Palm Beach County are already participants in the program.

These objectives are met by encompassing county and municipal plans and programs including FMA, CRS, Comprehensive Emergency Management Plans, Comprehensive Plan, Capital Improvement Plan and the Unified Local Mitigation Strategy. All have the objective to ensure the successful mitigation activities to reduce repetitive loss properties throughout the county and its municipalities.

Outreach & Education

The Local Mitigation Strategy administers and otherwise supports a range of community Outreach and Education initiatives. Detailed descriptions of these activities and initiatives are contained in the County's Comprehensive Emergency Management Plan, the Five Year Strategic Plan, documentation associated with Community Rating System recertification, Businesses Addressing Readiness & Recovery program documentation, the Emergency Management Website, etc. Outreach activities take many forms, including (but not limited to): presentations, workshops, courses, multilingual brochures, flyers, websites, media releases, plans, telephone directory postings, mailings and inserts, expos, on-site briefings, special websites and website postings, and library holdings. Many of these activities are done in cooperation with private-public partners and sponsors.

As part of its participation in the Community Rating System program, the County maintains a collaborative Outreach Project Strategy Program, which encompasses a number of major outreach activities which are updated and reported to the Insurance Services Office as part of the annual recertification process.

A representative listing of some of the more significant outreach and education activities includes:

- Annual publication of a Hurricane & Flood Survival Guide (3 languages)
- Annual Hurricane & Flood Awareness Expo(s)
- Bell South Directory Emergency Information Pages (4 Directories)
- Preparation/distribution of hazard and audience-specific brochures
- Business preparedness and post-disaster needs posting websites
- Business disaster planning guide - CD
- Flood Information website
- Emergency Information website
- LMS meetings open to the public
- Library holdings through the County Library System
- Special programs for association represented communities
- On-site presentations, structural evaluations, and planning assistance for special-interest groups such as home owner associations, property management firms, businesses, churches & synagogues, public gathering facilities, etc.

- Speakers bureau of county, municipal, not-for-profit and private business volunteers
- Participation in numerous fairs and expos hosted by public and private sector groups
- Annual hurricane call-in event sponsored by a local TV affiliate
- Course offerings (Certified and not) on safety and preparedness topics
- Participation as presenters/instructors at the National, Governor's, and South Florida hurricane conferences
- Published articles, papers

Most of the activities above are provided on an ongoing or seasonal basis. Details of most activities are documented in one or more of the following forms: in program specific reports, recertification packages, post-activity reports, monthly status reports, and in plan updates. The County and municipal jurisdictions maintain and distribute government and not-for-profit publications as appropriate. Lists of most distributed and held government and not-for-profit publications are contained in the county's Comprehensive Emergency Management Plan and relevant Community Rating System documentation.

FMA

The Flood Mitigation Assistance (FMA) Program is a National Flood Insurance Program (NFIP) initiative administered by the Florida Department of Community Affairs to help communities identify and implement measures to reduce or eliminate the long-term risk of flood damage to homes and other structures insurable under the National Flood Insurance Program.

Presently Palm Beach County offers the program on a limited basis to owners of "repetitive flood loss" properties based on the availability of federal and state funds and the availability of local resources to administer the program. The program provides homeowners with reasonable, cost-effective hazard mitigation options and potential public and private financing alternatives.

The Federal Emergency Management Agency contributes 75% of eligible mitigation costs. The remaining 25% must come from non-federal sources. The homeowner must contribute at least 12.5%. However at the present time, Palm Beach County requires the homeowner to contribute the full non-federal share.

Examples of flood mitigation projects that might qualify for FMA funding assistance include:

- Elevation of flood prone structures
- Relocation of flood prone structures
- Demolition (with or without rebuilding at higher elevation)
- Acquisition
- Various flood proofing measures.

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 Project Support Committee is available to offer technical and administrative guidance and assistance to applicants, including assistance with benefit-cost computations.

Table 4.4. Summary of repetitive loss properties by local government and Community Rating System (CRS)

Community Number	Community Name	Number of Repetitive Loss Properties	Number of Claimed Repetitive Losses	CRS Rating	% Reduction in NFIP Rates
120192	Palm Beach County - Unincorporated	41	96	7	15%
120193	City of Atlantis	0	0	8	10%
000000	City of Belle Glade	0	0	NP	0%
120195	City of Boca Raton	3	7	8	10%
120196	City of Boynton Beach	5	30	8	10%
000000	Town of Briny Breezes	0	0	NP	0%
120198	Town of Cloud Lake	1	2	8	10%
125102	City of Delray Beach	1	2	9	5%
120200	Town of Glen Ridge	0	0	NP	0%
000000	City of Greenacres	0	0	NP	0%
125109	Town of Gulf Stream	2	5	8	10%
120205	Town of Haverhill	1	UK	NP	0%
125111	Town of Highland Beach	0	0	9	5%
120207	Town of Hypoluxo	0	0	8	10%
120208	Town of Juno Beach	2	6	5	25%
125119	Town of Jupiter	7	24	7	15%
120162	Town of Jupiter Inlet Colony	0	0	NP	0%
120211	Town of Lake Clark Shores	0	0	9	5%
120212	Town of Lake Park	2	4	9	5%

Community Number	Community Name	Number of Repetitive Loss Properties	Number of Claimed Repetitive Losses	CRS Rating	% Reduction in NFIP Rates
120213	City of Lake Worth	8	19	9	5%
120214	City of Lantana	6	7	9	5%
	Loxahatchee Groves				
120215	Town of Manalapan	2	7	9	5%
120216	Town of Mangonia Park	1	0	8	10%
120217	Village of North Palm Beach	1	2	8	10%
125134	Town of Ocean Ridge	13	29	8	10%
120219	City of Pahokee	1	UK	NP	0%
120220	Town of Palm Beach	43	114	7	15%
120221	City of Palm Beach Gardens	2	4	7	15%
125137	Town of Palm Beach Shores	0	0	9	5%
120223	Village of Palm Springs	1	2	8	10%
125142	City of Riviera Beach	6	UK	NP	0%
000000	Village of Royal Palm Beach	0	0	NP	0%
000000	City of South Bay	0	0	NP	0%
120227	City of South Palm Beach	3	10	8	10%
120228	Village of Tequesta	1	3	8	10%
125157	Village of Wellington	0	0	9	5%
120229	City of West Palm Beach	18	40	7	15%

• Based on the FEMA Florida Repetitive Loss List • NP Non-Participant in the CRS Program • UK Unknown

Elevation of New and Substantially Improved Structures

Damage to “new” and “substantially improved” floodplain structures is minimized by elevating the lowest floor of occupied areas a specified amount above the 100-year flood elevation. Substantially improved structures are those where the cost of reconstruction, rehabilitation, additions or other improvements equals or exceeds 50% of the building's market value. Substantially improved structures are subject to the same elevation standards as new structures. Check with your local permit office for specific requirements in your jurisdiction.

Elevation Certificates

To verify that a building has been properly elevated, building officials require the completion of an Elevation Certificate by a professional engineer or surveyor. After the lowest floor is in place, its elevation above sea level is determined by a survey. The Elevation Certificate is part of the permit record and must be submitted before the building may be occupied.

Further information on the requirements for floodplain development, the permitting process and Elevation Certificates can be obtained from your local permit office.

Documented Repetitive Losses

Palm Beach County adheres to FEMA's definition of repetitive loss properties, that is, properties whose owners have received payment for more than one claim within a 10-year period of their flood insurance policies as recorded by the NFIP. **Table 4.4** summarizes the repetitive losses from Palm Beach County and the incorporated areas. Also, present data on each community's CRS score indicates the percent reduction in National Flood Insurance rates each community's residents receive if they participate actively in the CRS program. **Appendix J** identifies and locates each repetitive loss property and evaluates its continued vulnerability to flooding damage.

At this writing, FEMA records accounted for 183 registered repetitive loss properties within Palm Beach County unincorporated and its jurisdictions. The number has grown steadily with the increased tropical activity and extraordinary rain events the county has experienced. A significant percentage of these repetitive loss properties lie outside the county's recognized special flood hazard areas.

The Palm Beach County Unified Local Mitigation Strategy's goal is to reduce the number of repetitive loss properties throughout the county and prevent new properties from being added to the list. The county takes great strides in trying to reduce and prevent repetitive loss properties. The county takes part in various programs to reduce and prevent repetitive losses such as FMA and CRS as demonstrated above. The LMS also has various plans incorporated into it to ensure it correlates with the other objectives throughout the county and its jurisdictions. The LMS is referenced throughout the Mitigation section of the Comprehensive Emergency Management Plan as the guiding source for mitigation activities pre and post disasters. Also, the Capital Improvement Plans reflect mitigation objectives to prevent repetitive loss properties.

Since its inception, Palm Beach County's LMS has placed a major emphasis on drainage improvement projects as a major flood mitigation strategy. Indeed, drainage improvement projects have had a predominant representation on the LMS prioritized project list. Some large-scale drainage improvement projects, perceived to be beyond the threshold for funding assistance applications, have historically been handled locally by Capital Improvement Plans rather than through the LMS. The LMS drainage projects are often coordinated with larger self-funded community drainage improvement projects.

Drainage improvement projects; however, are often not the answer for isolated repetitive flood loss properties. Increasingly, the LMS has been moving toward a more comprehensive program of mitigation directed at repetitive loss problems.

The county's network of CRS communities provides an excellent mechanism for identifying repetitive flood loss properties and coordinating comprehensive activities to launch mitigation initiatives. The LMS program not only provides the strategic guidance necessary to coordinating flood mitigation initiatives, it also helps in translating those strategies into viable flood mitigation projects. The final component in Palm Beach County's multi-program strategy is participation in the Flood Mitigation Assistance (FMA) Program.

Mitigation Projects to Repetitive Loss Properties

The county first submitted project applications for FMA assistance in 1999. It was not until 2002 that the initial two projects were approved for FMA funding. The projects were completed in 2003. These projects provided all jurisdictions an opportunity to learn about the program and information that would be useful in planning their own programs. These two completed projects have been successful since two properties have been taken off the repetitive loss properties list.

Project #1 - Elevation Project

The first project involved a home in the unincorporated area of Palm beach County referred to as "The Acreage." The property has amassed four insurance losses since 1988 despite. The property does not reside in Special Flood Hazard Area.

The elevation involved raising a slab on grade structure with the slab intact and placing it on extended foundation walls. A series of coordinated hydraulic jacks were used to achieve the target elevation above the base flood elevation. Openings for equalization of flood forces were included per FEMA specifications.

Project #2 – Flood Wall Project

The second FMA project involved a multiple flood loss property located in a residential community in the Lake Park area. The property did not suffer from flood water build up. Instead, flood water run off from neighboring properties tended to enter the slab at grade level structure, flowing through the house before exiting to lower elevations on the opposite side of the home. The project involved a combination of mitigation measures, including construction of a deflection wall, creation of swales, and the installation of improved drainage systems. These measures permit flood water runoff to be redirected around the structure rather than through it.

These projects served two important purposes. They gave the county's CRS participating communities opportunity to observe and learn about the requirements and procedures of the FMA program and what will be required to organize and manage their local initiatives. They also provided lessons learned that will be valuable in developing a model for county jurisdictions and residents seeking FMA assistance.

4.1.4.2 Municipalities

Within Palm Beach County, there are 38 municipalities (see **Table 4.1**). There is wide variation among the jurisdictions in terms of community character. Community character is shaped by factors such as land use mix, density, size of population, and location (e.g., on the Atlantic Ocean, adjacent to Lake Okeechobee, inland). Due to the differences, it is not unusual for local

governments to have different perspectives relative to the significance various hazards have on their community. Certainly there are hazards that all jurisdictions, regardless of the community character, have concern over such as flooding, hurricanes, tornadoes. In agricultural communities like Pahokee or Belle Glade, biological pest control, freezes, and drought are more likely to be of greater concern, while in communities bordering the Atlantic Ocean (e.g., Ocean Ridge, Palm Beach, Jupiter), hazards such as beach erosion and shoreline stabilization generate considerable concern among the residents.

Table 4.2 delineates the location, type, community character, economic base, and degree to which each of the participating municipalities within the county is “built-out” at the present time. The following defines the headings displayed in the table:

- Location

Coastal - Municipality borders on the Atlantic Ocean

Inland - Municipality does not border on the Atlantic Ocean or Lake Okeechobee

Lakefront - Municipality borders on Lake Okeechobee

- Urban/Rural

Urban - Area characterized by activities predominantly based on the manufacture, production, distribution, or provision of goods and services in a setting which typically includes residential and nonresidential development uses other than those which are characteristic of rural areas

Rural - Areas characterized by activities which are largely based on agricultural uses or the extraction of natural resources, or areas containing large proportions of undeveloped, unimproved, or low density property

- Community Character

Residential - Land use is primarily for housing

Retirement - Land use is primarily for adult housing communities

Working - Land use is primarily connected with the sale, rental, and distribution of products or performance of services

- Percent Built Out

- Economic Base

Agricultural - Main source of income is activities within land areas which are predominantly used for the cultivation of crops and livestock

Business - Main source of income is primarily connected with the sale, rental, and distribution of products or performance of services

Industrial - Main source of income is activities predominantly connected with manufacturing, assembly, processing, or storage of products

Residential/Retirement - Main source of income is primarily connected with real estate.

Listing of Municipal Agencies

The organizational structure of each municipality in the county differs in terms of organizational complexity and functional responsibility. A city like West Palm Beach (population – 105,068) has an organizational structure that is considerably more complex than some of the smaller communities in the county like Atlantis, Cloud Lake or Jupiter Inlet Colony.

The following is a brief discussion of typical agencies within the municipal organizational structure having hazard mitigation functional responsibilities.

Emergency Management. Emergency management responsibilities generally fall within the purview of public safety, fire, and/or police departments. West Palm Beach is one of the few municipalities that have a staff person whose sole responsibility is emergency management. It is not unusual in many cities that emergency management is an individual's secondary responsibility. During emergency events, such as hurricanes, each local government has an "executive group" (e.g., Mayor, city manager, police chief, fire chief) which coordinates the city's efforts with the county Division of Emergency Management.

Planning. The larger jurisdictions such as West Palm Beach, Boca Raton, Jupiter, Boynton Beach, Delray Beach and Palm Beach Gardens operate planning departments with professional staffs. Some of the smaller jurisdictions have single-person staffs, while the smallest assign those duties to a lay planning and zoning board and provide staff support by a building official or comparable staff person. The community development departments review zoning petitions, site plans, and other development orders (e.g., variances, special exceptions), as well as administering their local comprehensive plan.

Building. Most municipalities issue their own building permits. However, for two municipal governments, the County Building Division issues their permits. They include Ocean Ridge and Gulf Stream. All operate under the Standard Building Code. Modifications are made to the various sections (e.g., building, plumbing, fire) of the Code from time to time; however, municipalities may or may not amend their local building code to reflect those changes. They do if they feel that the code modification is appropriate to their community.

Public Works & Engineering. While not all municipalities have a public works and engineering department, all generally perform this function in some manner. If it is under a contractual arrangement, there is someone in the jurisdiction responsible for overseeing the consultant. The group having responsibility for public works and engineering has the responsibility for implementing structural improvements (e.g., stormwater facility retrofit, shuttering buildings, constructing new EOCs).

Fire Departments. While many cities contract with the County Fire-Rescue Department, there are others that operate their own fire-rescue departments. In some instances, smaller jurisdictions contract with a larger municipal neighbor. For example, Boynton Beach provides fire service to Golf, and Ocean Ridge and Delray Beach provides fire service to Gulf Stream.

Municipal Mitigation Policies, Ordinances, and Plans

Policy Plans.

- Municipal Comprehensive Plans

Like the county, each city has an adopted Comprehensive Plan. It serves as a policy instrument for each city and defines that particular city's development and redevelopment policies. All comprehensive plans are required by Section 163.3161, F.S. to contain 8 plan elements: Conservation, Infrastructure (i.e., potable water, sanitary sewer, stormwater management, solid waste, natural aquifer recharge), Future Land Use, Housing, Recreation and Open Space, Transportation, Intergovernmental Coordination, and Capital Improvement. For units of local government abutting the Atlantic Ocean, they must also prepare a Coastal Management Element. In Palm Beach County, 19 municipalities border the Atlantic Ocean coastline.

There is considerable variation among local governments in the depth to which hazards are addressed in their comprehensive plans. Certainly the population size, geographic spatial limits, diversity in mix of land uses, and depth of understanding of hazard mitigation affects the level of detail local governments apply to the issue of hazards. Any extended discussion of hazards occurs, for the most part, in the Conservation, Coastal Management, and Infrastructure elements. A city-by-city hazard mitigation inventory, categorized by comprehensive plan element, is summarized in **Table D-2**. Specific mitigation-related policies from each municipality's Comprehensive Plan are described and cross-referenced in **Appendix D**.

- Local Emergency Management Plans

A number of municipalities have adopted emergency management plans. Most follow the content of the county CEMP. Their focus is on emergency response versus long-term hazard mitigation.

Ordinances and Other Plans. Other types of ordinances and plans municipalities that have adopted that are relevant to hazard mitigation include:

- Incorporating the 1997 edition of Standard Building Code complete with Appendices A,B,C,D,E,F,G,H,I,J and K;
- Adding window glazing and/or shuttering requirements to their building codes;
- Becoming affiliated with the Community Rating System (CRS) program (*currently 29 out of 37 local governments are CRS qualified*);
- Emergency Water Restriction ordinances;
- Stormwater Master Plan;
- Flood Damage Prevention and Protection Ordinance

Mitigation Projects/Initiatives

A LMS Survey was prepared and distributed to all participating local governments as a means to inventory and assemble data on mitigation projects and initiatives each governmental entity had or was implementing. Projects are defined as capital facilities. Initiatives can be anything from purchase of property and relocation of homes or businesses, to upgraded building codes, to incentives, to public information campaigns, to preparedness training and drills, to professional development seminars. Thirty-six municipalities responded. Existing municipal hazard mitigation projects, and programs are summarized in **Table D-3**. There is wide variation;

while a number of municipalities have not undertaken any mitigation projects, others have been highly proactive, completing multiple projects/initiatives. The following provides a general discussion of what is being accomplished by municipal governments in Palm Beach County. Also, there are a few communities that already have well-developed hazard mitigation programs in place. A brief discussion of each is included.

Projects. Shuttering public facilities, and upgrading or correcting drainage facility deficiencies are the two most common types of hazard mitigation projects undertaken by Palm Beach County municipalities. Other types of projects reported in the local government LMS Survey are:

- Glazing exterior windows on public facilities to achieve impact resistance from windborne debris;
- Replacing and/or upgrading drainage pumps;
- Installing emergency power generators;
- Installing a radio telemetry monitoring system for public utilities;
- Sirens/loudspeaker warning system used for severe storms/lightning

Codes/Ordinance Amendments. Many municipalities incorporated the updated Standard Building Code modifications introduced in 1994. Some of the more important features include:

- Modifying building codes to require floor slab or wood joists be above the 100-year floodplain and a minimum of 18 inches above the crown of the road;
- Requiring the elevation of structures; and
- Trusses manufactured in accordance with local wind models

Other actions municipalities have taken include:

- Modifying existing Local Development Regulation (LDR) to incorporate windborne debris impact standards; and
- Amending LDR to include section titled, "Building and Property Maintenance: Hurricane Precautions.

Professional Development Training. Twenty-three municipalities reported that their staff received professional development training over the course of a year. The amount of training staffs received differed by jurisdiction. City staff receiving training in emergency management activities typically comes from the following offices: fire-rescue, police, recreation, building, community development, and utilities. Types of training have included:

- Damage assessment
- Computer-aided management of emergency operations
- Amending LDR to include section titled, "Building and Property Maintenance: Hurricane Precautions.
- Orientation to disaster assistance programs
- Radiological emergency management
- Annual state hurricane conference training sessions
- Natural hazards mitigation and recovery
- Yearly conference of National Fire Protection Association
- Yearly conference of Building Officials Association of Florida

- Training sessions with Federal Emergency Management Agency
- Building Inspector courses on topics like hurricane resistant structural design, roofing updates, wood construction, and fire resistance and egress

Preparedness Training. Fourteen local governments reported that they conduct preparedness training and drills for emergency situations. A number reported that annually, they carry out a mock hurricane disaster. Other types of preparedness training reported in the LMS Surveys included:

- Structural fire drills
- Tornado drill
- Chemical spills
- Terrorist response
- Chlorine leak drills
- Communication tests
- Generator tests

Education/Public Awareness. It is common practice among local governments to distribute informational materials to its citizens, especially as it relates to hurricanes. Among the 18 local governments reporting, the scope of their programs varied. The following are methods municipalities in Palm Beach County use to disseminate information about hazards or an impending emergency event:

- Annual correspondence mailed to the residents reminding them of the need to be prepared for a hurricane
- Hurricane Survival Guide
- A Homeowner's Guide to Hurricane Retrofit
- Classes on Emergency Response Training (C.E.R.T.)
- Discussions with residents about hurricane preparedness
- Hurricane preparation video shown on city cable station
- Brochures on variety of disaster/emergency topics, including insurance, pet care, business interests, children and disasters, lightning and tornado safety
- FAX-back system with a menu of public safety information
- Dialogic System which automatically dials and plays recorded information regarding imminent emergencies
- City newsletter

4.1.5 Intergovernmental Coordination

An essential element of the hazard mitigation process is intergovernmental coordination. Disasters know no boundaries; governments and service providers increasingly must work together to strengthen communities against the loss of life and property. Coordination is important not only horizontally at the local level between county, municipalities, non-profit organizations, and the private sector, but also vertically with key state and federal agencies. Besides the potential of the LMS initiative, there are several other coordination mechanisms that already exist. They are described briefly below.

Metropolitan Planning Organization

The Metropolitan Planning Organization of Palm Beach County, commonly known as the MPO, coordinates local, state, and federal funding for thoroughfare improvements. The policy board is comprised of 18 voting members (i.e., 5 representatives of the Board of County Commissioners, 13 representatives from the municipalities), and one non-voting member (i.e., Secretary of the Florida Department of Transportation, District IV). Two key policy documents of the MPO are the long-range transportation plan, and the five-year transportation improvement plan (TIP). The TIP identifies and schedules all future roadway improvements in the near-term.

Local Government Comprehensive Plans

One mechanism to achieve intergovernmental coordination is the local comprehensive plan. As identified in **Appendix D**, each comprehensive plan contains an intergovernmental coordination plan element.

Palm Beach County Comprehensive Emergency Plan

The county's CEMP as described in the section titled, **Mitigation Policies and Ordinances**, is very important in terms of coordination. It identifies coordination of the responsibilities and functions of agencies and organizations during disaster situations.

District X Local Emergency Planning Committee

The LEPC is an important vehicle to coordinate administering regional compliance with hazardous materials reporting and training laws. The TCRPC provides full-time staff to administer the activities of the Committee.

State Emergency Management Plan

The State of Florida CEMP establishes the framework of a coordination system to ensure that the State of Florida is prepared to respond to the occurrence of emergencies and disasters. The plan describes roles and responsibilities of state agencies, special districts, local governments, and voluntary organizations, unites the efforts of these groups for a comprehensive approach. The plan is divided into three sections.

The Basic Plan:

Outlines how the state will assist counties in response, recovery, and mitigation of disasters; details responsibility at various levels of government; describes method of operations and financial management policies; ensures continuity of government; and addresses recovery issues.

Specific Response/Recovery Actions:

Actions that are unique to a specific hazard, and are described in the Basic Plan and Response Functions sections.

Response Functional Annexes:

Present the State's strategies for disaster response by outlining Emergency Support Functions (ESF). ESF's are structured from the Federal Response Plan.

Comprehensive Plan Amendment Coordinated Review Committee

The Comprehensive Plan Amendment Coordinated Review Interlocal Agreement establishes a countywide Comprehensive Plan Coordinated Review Process. It is designed to provide coordination of proposed plan amendments, cooperation between affected local governments and service providers, and opportunities to resolve conflicts only within the Plan Amendment Process. This process includes the following actions:

- Proposed plan amendments must have sufficient distribution and dissemination to insure that initial transmittal and final approval do not occur without adequate notice to local governments and service providers who may be adversely affected by the action.
- An avenue for discussion and evaluation of the proposed plan amendments is created so that the governing body is aware of objections, the basis for them, and the reasonableness of the objection.
- An opportunity is created for conflict resolution of an item which, if approved, may result in a potential problem for another local government or service provider.
- The Comprehensive Plan Amendment Coordinated Review Process does not diminish or transfer existing authority with respect to planning and implementation decision of the participants.

The Multi-Jurisdictional Issues Coordination Forum

The forum has been established through an resolution/interlocal agreement. The primary goal of this entity is to establish a mechanism that will provide a means of communication and education between the various local governments and service providers. This is accomplished through the receipt and review of reports; through presentations of items of multi-jurisdictional impact; and through the review of actions taken by the Executive Committee. All members of this forum must be participants in the Comprehensive Plan Amendment Coordinated Review Interlocal Agreement.

EM Team

EM Team is an organization of professionals from agencies and municipalities throughout Palm Beach County who share a mutual interest in emergency management issues. The EM Team meets once a month. Meeting notices of related interest, and other information are distributed in advance of the scheduled meeting date. Members of EM Team benefit by:

- Receiving the latest information from federal, state and local levels of government concerning all issues relating to comprehensive emergency management;
- Strengthening ties and sharing information with the county, neighboring municipalities and other agencies in the area;
- Exchanging ideas and receiving information regarding training opportunities in emergency management (many of which are free or involve minimal costs);

- Meeting the managers and officials they may need to call on in times of emergency or disaster.

4.2 PRIVATE SECTOR BACKGROUND AND ANALYSIS

4.2.1 Background

Major disasters have repeatedly demonstrated that all components of the community can be significantly impacted, either directly or indirectly by the event. It is therefore important that mitigation and redevelopment planning efforts also involve the entire community. Involvement of the private sector in the LMS process was given high priority from the outset of the program by the Division of Emergency Management (DEM). Besides receiving funding from the Florida Department of Community Affairs (FDCA) to prepare a LMS, the FDCA also awarded Palm Beach County a grant pursuant to Chapter 9G-19, Florida Administrative Code, to develop a Business Community Recovery and Redevelopment Strategy Implementation. Since private sector involvement was important in both efforts, the DEM a committee for education and outreach was created. In addition, staff from the DEM and the Palm Beach County Office of Economic Development coordinated with each other on all relevant issues of mutual interest to both programs.

The following groups have participated actively in the program:

Business Alliance	Business Loan Funds
Florida Light & Power Company	the Palm Beaches
Palm Beach Community College	Florida Insurance Council
Black Business Investment, Inc.	Brown Distributing
Home Depot	Tourist Development Board
Motorola	Farm Bureau West
Port of Palm Beach	Palm Beach County
Delray Beach Chamber of Commerce	Purchasing Department
Delray Beach Community	WPBF Channel 25
Development Agency	
Palm Beach County Information	The Boynton Beach Mall
System Services Department	Palm Beach County
Fidelity Federal of the Palm	Economic Office
Beaches	Poe & Brown, Inc
The Northern Palm Beach	Small Business Bank
Chamber of Commerce	Suntrust
Marine Industries Association of	Pratt & Whitney
Palm Beach County, Inc	Bank Atlantic
Zions Small Business Finance	

Perhaps the greatest accomplishment, beyond the specific accomplishments outlined in this section, has been special collaborative relationships now established between the private sector and public sector entities. Cornerstone partnerships in this endeavor now exist between the Palm Beach County DEM and Economic Development Divisions, and participating municipalities on the public side and a network of participating Chambers of Commerce.

The initiatives outlined in this section are an integral part of the ongoing local disaster mitigation strategy. In the private sector, efforts are directed at minimizing private sector losses, improving

business survival rates, protecting and preserving the economic base provided by businesses, and speeding the overall community recovery process.

Four key objectives were addressed:

<u>Objective 1</u>	<i>Establish improve intergovernmental and private sector coordination.</i>
<u>Objective 2</u>	<i>Refine the hazard and vulnerability analysis for the economic sector.</i>
<u>Objective 3</u>	<i>Evaluate local available resources, identify gaps and develop appropriate funding mechanisms and strategies to fill any gaps.</i>
<u>Objective 4</u>	<i>Create a public education program focusing on educating the business community to be prepared for disasters and able to recover quickly.</i>

4.2.2 Accomplishments

The following summarizes the improved accomplishments of the private sector work effort of the Outreach and Education Committee by objective:

4.2.2.1 Objective 1: *Establish improved intergovernmental and private sector coordination.*

Three tasks related to this objective represent the beginning points for an ongoing, long-range program to improve intergovernmental and private sector collaboration, coordination and relations.

Task 1

Prepare a comprehensive vendor list and inventories of equipment and supplies. The primary thrust of this task was to create a system whereby businesses victimized by disasters could access vendors and suppliers to procure goods and services necessary to rebuild and resume normal business operations.

Early in the project, the Economic Development Specialist met with the purchasing staff of several county and municipal agencies relative to the characteristics of their databases and their potential suitability for business disaster applications. With the assistance of representatives from the Information Systems Services Department (ISS), the idea was conceived of housing the vendor database in the business section of the Palm Beach County Emergency Management web site.

Upon further discussion, the idea eventually evolved to the creation of a reverse vendor database, an emergency need posting system for disaster-impacted businesses. This approach avoids most of the maintenance costs and burdens that are associated with traditional vendor databases.

ISS was subsequently commissioned to develop this system, eventually dubbed the "Emergency Business Buyers' Database." Development and testing were successfully accomplished in early July; the system awaits activation if and when a local disaster occurs.

Task 2

Develop a comprehensive list of needs for emergency contracts and agreements, and secure sources for items needed by the response community which are usually not needed in day to day operations. Research determined that the Palm Beach County Purchasing Department has in place item lists, source lists, and systems and procedures necessary for fully meeting the

needs of the County's response community and to satisfy the assistance requirements spelled out by the mutual aid agreement with Orange County. Efforts to publicize the existence of this list to the local community are being made through the Chambers of Commerce to facilitate local involvement, when possible.

Task 3

Establish Business Hotlines, Business Aid and Redevelopment Assistance Centers. An important element in the support of private sector preparedness and timely recovery is the ability of businesses to stay abreast of critical information. An objective in this project was to provide the business community with a single-point contact for accessing important business-related information to assist pre-disaster preparations and post-disaster recovery activities. As part of its partnership agreements with various Chambers of Commerce throughout the county, Palm Beach County Emergency Management is encouraging chambers to dedicate one or more telephone lines to serve as an emergency "hot line" service for community businesses.

At the time of this writing, discussions were underway with the Delray Beach Chamber of Commerce to decide remaining operational, administrative and technical details of the system. Thereafter, an emergency "hot line," staffed at the Chamber by its members, will attempt to coordinate and respond to pre and post disaster business concerns and needs.

4.2.2.2 Objective 2: Refine hazard and vulnerability analysis for the economic sector.

The Steering Committee definition of critical facilities includes several economic sector facilities, notably nursing and convalescent centers, and public communication facilities in what are designated as primary critical facilities, and financial institutions, pharmacies, reconstruction material suppliers, medical clinics, and food distribution centers in what are designated as secondary critical facilities. Private sector primary critical facilities are included in the ArcView database, and, when the Property Appraiser's office completes the automated inventory conversion of commercial and industrial properties into an ArcView database, secondary critical facility information will be merged with the database file.

The vulnerability of the business community to potential disasters was analyzed. Mapping and tabular products were developed that may be used by commercial/industrial property owners for performing self-analysis of hazard vulnerabilities. These products also provide a better understanding of the various hazards that could potentially impact segments of business community.

An Economic Disaster Management Information System (EDMIS) was developed and designed. Unfortunately, this product cannot be used until database conversion is completed by the Property Appraiser's Office. Once on-line, however, EDMIS will be used to more fully explore mitigation opportunities in the private sector.

4.2.2.3 Objective 3: Evaluate local available resources, identify gaps, and develop appropriate funding mechanisms and strategies to fill the gaps.

Exploratory initiatives were explored relating to ensuring post-disaster cash flow, creating emergency loan programs and community credit programs, expediting the processing of post-

disaster loans, and establishing a "bridge loan" capability. The policies and programs of area banks were reviewed, various loan funds examined, and state and federal agency programs, including "Operation Open for Business," were reviewed. Among the most glaring "gaps" uncovered that could impact Palm Beach County businesses were the following:

- Meeting the managers and officials they may need to call on in times of emergency or disaster.
- Insurance typically does not cover all business losses.
- Banks will not necessarily loan money to victimized businesses and may not relax their requirements for financial documentation and credit status in emergency periods.
- Business interruption insurance is seldom purchased by businesses because it is so costly.
- Low interest loans for mitigation projects are not yet available in Palm Beach County.

The challenge of dealing with these issues, however, is indeed complex. The decision authority for creating policies and programs dealing with these issues invariably resides at levels outside Palm Beach County. Creation of emergency business assistance programs will likely require legislative initiatives and corporate lobbying beyond the influence of even regional interests. Even so, the need for creative funding mechanisms and strategies was a consistent theme throughout the project and was a common speaking point at private sector and public sector forums.

The project team of a year 1999-2000 grant funded to Palm Beach County, entitled *Businesses Addressing Readiness & Recovery* (BARR), will continue efforts to mobilize sufficient support to positively influence private sector and public sector decision makers to institute meaningful emergency assistance programs for businesses. It will support other related initiatives underway at the state level. The BARR program will also pattern many of programs and initiatives after those of *Project Impact* and the City of Deerfield Beach's *Operation Open for Business*.

4.2.2.4 Objective 4: Create a public education program focusing on educating the business community to be prepared for a disaster and able to recover quickly.

Two tasks of this objective address a program to enable the business community to educate and prepare itself, reaching the greatest number of businesses in the shortest time possible.

Task 1

Train Chamber of Commerce staff and the business community. During the course of the project, staff members attended, participated in, and led a variety of business-related forums on disaster issues, including disaster conferences, workshops, professional association meetings, expos and trade shows, and community planning sessions. They also worked closely with private and public sector experts on a number of significant community initiatives and reviewed extensive literature from FEMA, state, federal and non-government organization sources.

Among the many methods employed to reach and educate the business community throughout Palm Beach County were:

- Insurance typically does not cover all business losses.
- Distribution of specially designed BARR pamphlets and business cards
- “Of Interest To Business” location on the County’s Emergency Management web site
- Booths in expos, fairs, trade shows
- Presentations to business, professional and public sector groups
- Media interviews and articles
- Presentations at the 1999 National Hurricane Conference
- Participation in other initiatives (e.g. Project Impact and Operation Open For Business)

One-on-one contingency planning assistance for larger businesses. In this task, members of several Chambers of Commerce and mentors from large- and medium-sized businesses have been trained to train others and make presentations raising the business community’s awareness of preparedness issues and options. These efforts will continue.

Task 2

Develop a written business contingency planning guide. It was reasoned that preparation and distribution of a business contingency planning workbook and a business contingency plan template would be practical and productive contributions to building a more disaster resistant business community. The workbook that has been developed serves as the primary text for Emergency Management’s ongoing series of contingency planning workshops. Following the template, small- to middle-sized businesses are able to easily prepare contingency plans tailored to their specific needs.

A copy of the contingency planning workbook and promotional materials produced in conjunction with hosting Chambers of Commerce is available from the DEM. At the time of this writing, approximately 125 businesses have attended workshops and prepared plans.

Conducting workshops will continue to be a priority, as will be the training of industry trainers and the development of mentors to continue planning initiatives after the grant period concludes.

4.3 STRENGTHENING THE ROLE OF LOCAL GOVERNMENTS

As has been described in the text, local governments in Palm Beach County have taken steps to strengthen themselves both in terms of capital facility improvements and ordinances, regulations, and programs. Becoming more disaster-resistant is not limited to just hardening of structures. There are a number of activities that the County and municipalities can undertake to strengthen the role of local governments to lessen the impacts resulting from emergency events which do not require expending money on capital projects. Plans can be modified, laws and regulations can be amended, informational materials published and distributed, and professional training augmented. Ideas were generated from a variety of sources: interviews with local jurisdictions, and information generated from LMS Survey forms, the LMS Steering Committee and subcommittees, and discussions with local governments. The suggestions for countywide projects resulting from the various discussions with local government include:

1. Projects on the LMS PPL should be incorporated in local government comprehensive plans, capital improvement elements (CIE), at the time the CIE's are reviewed on an annual basis in accordance with Section 163.3177 (3) (a), Florida Statutes (F.S.).
2. As permitted under Section 163.3177 (7) (h) & (l), F.S., local governments could incorporate optional comprehensive plan element for public safety, or a hazard mitigation/post-disaster redevelopment plan;
3. Integrate the LMS into the Palm Beach County CEMP as appropriate and within the state specified guidelines.
4. Assess existing CRS programs to determine ways to strengthen and improve the local jurisdiction's CRS rating and support non-CRS communities to join the program.
5. Recommend that public building construction, whether it be new construction or renovation of older public structures, incorporate hazard mitigation building practices, whenever financially feasible;
6. Recommend to the appropriate authorities, the incorporation of safe room requirements in the local building code.
7. Update existing Palm Beach County post-disaster redevelopment plans, and prepare a model plan as a guide for local jurisdictions.
8. Support BARR in the continuing effort of coordination and mutual support between the county, local, and business community, before, during and after a disaster event.
9. The LMS Steering Committee should work with the partner communities and the county to continue ongoing funding and staffing for the continuation of LMS.
10. Recommend emergency building permit procedures to local authorities and jurisdictions.
11. Seek avenues to provide technical assistance in grant writing and engineering for local jurisdictions in the support of LMS projects.
12. Develop a model CEMP mitigation element as a guide for local jurisdictions in mitigation plan development.
13. Seek opportunities and potential funding sources to bury electrical wires, especially in multi-jurisdictional projects.
14. In order to increase shelter capacity countywide, support the retrofitting of all appropriate structures suitable for use as shelters.

Develop and disseminate multi-media outreach program countywide which will support the goals of LMS.