



**Countywide
Post Disaster Redevelopment Plan
Palm Beach County, Florida**

August 2006

Palm Beach County Division of Emergency Management
20 South Military Trail
West Palm Beach, Florida 33415

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*Sponsored by the State of Florida, Division of Emergency Management
Prepared by the Treasure Coast Regional Planning Council and
Continental Shelf Associates, Inc.*

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2006 Executive Committee**

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EXECUTIVE SUMMARY

Palm Beach County, like all communities, is vulnerable to disaster. Despite a long period of relative calm, Palm Beach County has a storied history of major disasters, including the infamous 1928 hurricane which still ranks as the second most deadly in U.S. history. Now during the current period of increased hurricane activity and after recent events in the Gulf States, a major hurricane hitting the county has become more conceivable, albeit just as frightening. Rather than simply hope a disaster never happens here, Palm Beach County has been proactive in increasing its ability and capacity to withstand and recover from a catastrophic disaster event.

Palm Beach County was one of the first jurisdictions in Florida to draft a Post Disaster Redevelopment Plan (PDRP) in 1996. Now, having become more sophisticated in emergency operations and hazard mitigation, the county decided it was also time to strengthen its post disaster planning. The 2006 Countywide Post Disaster Redevelopment Plan is the product of extensive research of best planning practices, lessons learned from recent catastrophic disaster events, and information gathered from participative public workshops. The purpose of the plan is to act as a single reference for guiding decision-making and action during the difficult disaster recovery period, as well as detailing actions that can be taken before a disaster strikes to speed the recovery process. It addresses disaster recovery and redevelopment issues with long-term implications. It does not address pre-disaster mitigation or immediate response and emergency operations, as those are already excellently covered by the Local Mitigation Strategy and the Comprehensive Emergency Management Plan, respectively.

The PDRP is action-oriented and outlines a countywide implementation approach. Through an Executive Committee representing county, municipal, non-profit, and private stakeholders and a flexible Working Group structure, actions outlined in the plan can be implemented as needed regardless of jurisdictional boundaries and possible staffing fluctuations in a post-disaster environment. Pre-disaster actions and annual maintenance of the plan allow the PDRP Executive Committee and Working Groups to actively prepare for a possible disaster. Post-disaster actions create a strategy for dealing with minor, major, or catastrophic disasters and are activated by the county's Executive Policy Group in concert with the PDRP Executive Committee and Recovery Branch Chief. The format of the plan allows new actions to be easily included and new participants to become involved immediately through the Working Groups. The success of the plan relies on the ease of implementation in the aftermath of a disaster and on the participants' commitment to continually strengthen it by performing "blue skies" preparations. A disaster event, while tragic, also presents a window of opportunity for strengthening communities and working toward disaster resilience. With a strong plan in place, Palm Beach County can take advantage of those opportunities and more quickly recover from a disaster should it experience one.

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1. INTRODUCTION

1.1 Purpose and Authority

The purpose of this Post Disaster Redevelopment Plan (PDRP) is to provide Palm Beach County with a single reference for guiding action and decision making during the difficult disaster recovery period, as well as detailing actions that can be taken before a disaster strikes to speed the recovery process. With this PDRP, the County and its municipalities will be in a better position to recover more rapidly from a disaster event and to use redevelopment as an opportunity to build a more sustainable community (Florida Department of Community Affairs, 2006).

State regulations in Florida require that all coastal jurisdictions include in their comprehensive plan's Coastal Management Element the intent to prepare a PDRP "which will reduce or eliminate exposure of human life and public and private property to natural hazards" (§9J-5.012(3)(b)(8) *F.A.C.*). Palm Beach County's Objective 2.5 in the Coastal Management Element clearly states the County's intent to implement and maintain the PDRP through the Emergency Management Division of the County's Public Safety Department (Palm Beach County, 2005). On June 4, 1996, the Board of County Commissioners adopted the original PDRP by Resolution R-96-719. This latest revision of the PDRP has been developed in accordance with State requirements, as discussed in the next section, and the Disaster Mitigation Act of 2000 (P.L. 106-390). This Plan has been adopted as [insert ordinance # once adopted] on [date] by the Palm Beach County Board of Commissioners. The following municipalities have also adopted the plan: [insert cities that adopt]. Adoption records can be found in **Appendix C**. If conflicts arise between provisions of this plan and the CEMP, the latter prevails.

1.2 How to Use this Plan

This PDRP addresses recovery and redevelopment issues that result from a disaster, particularly a hurricane. It is not meant to address immediate response issues or pre-disaster mitigation; however, there will be some overlap as there is no clear boundary between response operations and recovery or redevelopment and mitigation. **Figure 1.1** illustrates the cyclical nature of disaster management and the orange colored text represents the phase of recovery and redevelopment as addressed in this plan. All recovery issues, after initial damage assessments up until major redevelopment initiatives have been completed, are intended to be addressed by this plan. Activation and deactivation of the plan are further addressed in **Section 3**.

Figure 1.1 Disaster Risk Management Cycle



Source: Australian Development Gateway

The PDRP format was developed for ease of implementation in the post disaster period when the environment is often chaotic and stressful. The first two sections of the Plan, **Introduction** and **Major Post Disaster Redevelopment Goals and Issues**, act as a foundation by providing background information and a comprehensive framework of goals and issues. Users of this Plan will want to read these sections at least once, while the public and others who are not responsible for implementation of the PDRP will probably find **Sections 1 and 2** the most informative. The remaining three sections, **Plan Implementation**, **Action Plan**, and **Maintenance of the Plan**, are the core components of the PDRP as they are action-oriented and guide implementation. These sections will be most valuable to those who are implementing the Plan. **Section 4, Action Plan** is presented in a matrix format divided into four separate tables based on the timeframe for the actions. The PDRP Committee and others responsible for implementing action items will also have access to **Section 4** as an electronic spreadsheet so that they can search for and sort action items as needed and keep track of their status. Each action item corresponds to one of the issues and goals provided in **Section 2**. **Appendix E** offers the actions organized by these issues for an alternative way of analyzing implementation. The Appendices also offer other tools and references. For instance, **Appendix A** includes a glossary and quick index of the issues. **Appendix D** contains guides for implementation and sub-plans to the PDRP such as the debris management plan.

1.3 Relevant Plans and Policies

State requirements for the PDRP are limited and there are no specific federal requirements, but this does allow local governments the flexibility to develop a plan that will work best in relation to its many other planning documents. Florida Statutes ask that the PDRP “at a minimum, establish long-term policies regarding redevelopment, infrastructure, densities, nonconforming uses, and future land use patterns (§163.3177(7)(l) F.S.)” Obviously, there are many more issues regarding post disaster recovery and redevelopment and some are already addressed in plans such as the Comprehensive Emergency Management Plan (CEMP), the Local Mitigation Strategy (LMS), and the local Comprehensive Plan, particularly in the Coastal Management Element. **Table 1.1** shows how all of these plans should relate to hazard mitigation and post disaster redevelopment. As stated in the previous section, the PDRP is designed to be a single, stand-alone guide to aid decision-makers who, during the disaster recovery period, do not have time to use several different plans. In **Appendix B**, the pertinent post disaster related items from each plan are summarized for the convenience of implementing post disaster actions. In the action plan, recommendations for further integration and cross-referencing of post disaster issues into the different plans will be presented.

Table 1.1 How Local Plans Address Hazard Issues

Purpose and Use	CEMP	LMS	Comp Plan (coastal)	PDRP
Provide hazard assessment information	✓	✓	✓	
Define procedures for providing evacuation and sheltering services	✓			
Define policies for maintaining and enhancing evacuation clearance times		✓	✓	✓
Define capital expenditure priorities for enhancing evacuation and sheltering capacities		✓	✓	
Define policies and capital expenditure priorities for making the environment less hazardous		✓	✓	
Define policies for making structures more resistant to natural hazard forces		✓	✓	✓
Define capital expenditure priorities for making public facilities more resistant to natural hazard forces		✓	✓	
Define policies for managing the pre-disaster development and redevelopment of land exposed to natural hazards		✓	✓	
Define operational procedures for post disaster recovery and redevelopment	✓			✓
Define policies for governing post disaster recovery and redevelopment actions		✓	✓	✓

Source: Florida Department of Community Affairs, 2006

2. MAJOR POST DISASTER REDEVELOPMENT GOALS AND ISSUES

This section of the plan provides a narrative discussion of the broad issues under which actions found in **Section 4** are structured. The issues are grouped into four major topics: 1) local government recovery issues, 2) economic and private sector issues, 3) social and environmental issues, and 4) redevelopment and mitigation issues. Each topic begins with a goal to guide countywide actions on these issues. During the planning process, the issues in this section were voted on at a public workshop (see **Appendix C**) to determine which ones were most important to Palm Beach County. The result was a prioritized list of the ten most important post disaster issues:

1. Availability of Temporary Housing/Long-term Sheltering
2. Rapid Restoration of Power and other Private Utilities
3. Adequate Health and Mental Health Services available during Recovery
4. Including Affordable Housing in Redevelopment Projects
5. Debris Management and Disposal
6. Critical Infrastructure and Facility Repair
7. Sustaining Essential Governmental Services
8. Ability to Rebuild with Stronger Structures
9. Water Pollution from Sewer System Failures
10. Shortage of Contractors/Supplies Slows Repairing of Homes and Businesses

2.1 Local Government Recovery Issues

GOAL: Rapid Recovery. The County and other participating jurisdictions and agencies shall strive to provide services in a manner that speeds the ability of residents and business to recover from a disaster. Intergovernmental coordination and effective communication will be core methods for achieving this goal.

Availability of Temporary Housing / Long-term Sheltering

The lack of temporary housing or long-term shelters can be a serious issue in a post disaster situation. If people whose homes are uninhabitable have nowhere in the area to return to after a major or catastrophic disaster, then repopulation and thereby resumption of business will greatly suffer. The aftermath of Hurricane Katrina is a prime example of this issue. Inhabitable residential units in New Orleans are in demand and have high price tags attached. Much of the low-income population has had to start over in the towns they were evacuated to or where they have family. The current population of New Orleans is a fraction of what it was and employees for businesses that have returned are hard to find.

Another major reason for having adequate temporary housing is so that emergency shelters are not required to stay operational long after the danger of the storm has passed. In Palm Beach County, public

schools double as emergency shelters, and for the schools to reopen, those who have nowhere to go until their homes are repaired or they find new permanent housing must be provided other accommodations.

The identification of temporary housing and long-term sheltering requires planning at the local, regional and state level and is not something that should be left up to federal officials alone. As was seen with the “FEMA city” in Charlotte County after Hurricane Charley, simply finding space and running utilities for Federal Emergency Management Agency (FEMA) trailers may not always be the best solution. It can lead to crime and serious depression for those who must live in that situation (Kaufman, 2005). Another issue with relying solely on trailers and other outside assistance after the storm is that these temporary solutions may be needed for an extended period if reconstruction is lengthy. This has been a problem in Florida, and is causing worry in the Gulf Coast too, since temporary mobile homes may have to face a tropical storm or hurricane. Often, sites for temporary housing eventually become permanent residential areas, and the community may want to designate areas for temporary housing that are compatible with residential uses (Florida Department of Community Affairs, 2006).

In its Temporary Housing Plan for Catastrophic Events (see **Appendix D**), Palm Beach County largely relies on vacant residential structures, such as apartment complexes, condominiums, and motels/hotel rooms, as a source of temporary housing. Also, the county’s 139 mobile home and RV parks are given high priority due to existing infrastructure. The plan also identifies 15 vacant parcels throughout the county it deems suitable for siting trailers and/or tents for temporary housing. These parcels, pared from an original list of 78, were reviewed for access to infrastructure, community needs, and land use suitability. Additional actions can be taken to further strengthen the Temporary Housing Plan. Some suggested actions are outlined in **Section 4**.

Debris Management and Disposal

Debris removal is generally considered to be one of the first things that must be finalized before recovery and redevelopment can progress. Debris accumulation can be mitigated prior to the disaster event through landscaping regulations and maintenance and building codes that address wind-borne objects. Large piles of organic debris can become public health concerns, providing a haven for rodents and pests. Once dry, the debris becomes fuel for urban fires. On conservation or rural lands the accumulation of debris becomes fuel for wildfires, another natural disaster in itself. In each of these cases, the cost to collect and dispose of debris can be defrayed through Public Assistance (PA) grants from FEMA. Debris located on public lands and right-of-ways are eligible, as is debris deemed to be a threat to public health and safety or economic recovery. The grant requires matching funds from the county up to 25 percent of the cost for contracted or regular staff debris services.

The Palm Beach County Engineering and Public Works Department takes the lead, along with Solid Waste Authority (SWA), on collection and disposal responsibilities. The two entities have composed a Debris Management Plan (see **Appendix D**), and operational aspects are addressed in the County CEMP.

Countywide critical facility sites that affect public safety have top priority for clearance, whereas private debris is collected later. The Debris Management Plan has used an estimate of approximately 18 million cubic yards, produced by a Category 4 storm event, as its reference point for preparation. The disposal of private debris is often seen as a responsibility of local government. It can become a contentious issue when dealing with gated communities or private streets since the local government will not be reimbursed for collection there. Also, disposal sites, such as landfills or composting areas, can quickly exceed normal capacity during recovery activities. Therefore, the plan divides the county into 12 debris zones, each with a corresponding collection site. These sites are current or future parks and recreation facilities or landfills; intended to avoid conflicts with future land uses. The Florida Department of Environmental Protection regulates these sites and attempts to ensure debris composting and collection will not adversely affect the lands for future uses. Recycling and separation of debris types should be a focus of debris management as well. By keeping organic debris, such as tree limbs, separate local governments can then turn this into mulch, which can then be offered to citizens for landscaping projects after the storm. In addition, building materials are often mixed in with other debris, but items such as bricks could be salvaged. Finally, hazardous materials such as asbestos should not be mixed in with other debris. Education prior to a storm is the best way to accomplish debris separation so that more can be recycled and save room in our landfills.

Critical Infrastructure and Facility Repair

The repair of critical infrastructure and facilities is paramount when establishing normal operations within a community. Many times major roads, bridges, and facilities such as wastewater treatment plants, as well as other utilities, can be significantly damaged during a disaster event. Often these facilities serve “mission essential” functions within the community and, when not in operation, can debilitate the community’s ability to recover. When planning for critical infrastructure and facility repair, local governments should consider how repairs of these functions will be prioritized. The county’s CEMP addresses the need to prioritize infrastructure and facility repairs under ESF-3. Swift and immediate response in restoring those systems is essential to future redevelopment activities. Another component of facilities repair is the designation of alternative locations for essential functions to be carried out while repairs are being made to the facility. This type of planning is often referred to as Continuity of Operations Planning (COOP).

Beyond the immediate response duties addressed in the CEMP, the county can incorporate mitigation actions into annual preparations for the hurricane season. Rather than reconstructing the same infrastructure system that was damaged or destroyed by the disaster event, jurisdictions should explore new, innovative designs. Analyzing weak structural links in the systems or reviewing maintenance records that reveal aging systems could expose areas that are susceptible to failure. Where funds are available, these areas could be upgraded pre-disaster. However, when disasters strike before proper mitigation retrofits can be implemented, the county should be prepared with pre-approved new system designs. Preparedness will ensure a quick recovery and one which will promote mitigation against future disaster events.

Fair and Equitable Distribution of Disaster Assistance

The Federal government has stated through law the intent to ensure all relief and assistance is provided in an equitable and impartial manner (42 USC Ch. 68). Palm Beach is the largest county in Florida by area, with population centers spread throughout. Thus, distributing disaster assistance equitably is logistically difficult. The county has separated lakefront communities, far inland from the population concentration on the coast. There are also disparities in economic status, which, as was evident in New Orleans, warrants increased assistance for special needs populations. Citizens who remained in the City were largely lower income residents who lacked personal automobiles needed to evacuate. Likewise, certain demographic segments of Palm Beach County will require a greater amount of assistance in the post disaster period. The perception of inequality can raise tensions in an already tense post disaster atmosphere. Communication and public involvement in how community assistance funds are used can alleviate some of this tension.

Sustaining Essential Governmental Services in the Face of a Post Disaster Economic Crisis

Relatively minor disasters like Hurricanes Frances, Jeanne, and Wilma create scattered damages and short-lived, recoverable interruptions to local economies. Catastrophic disasters, on the other hand, cause unprecedented damages, including loss of lives, widespread physical damage, and massive dislocations of residents and businesses. They also cause serious and longer-term disruption to much of the core economic activity that generates the local tax and revenue bases necessary to sustain essential governmental services. Such disruptions, of course, do not relieve local governments from their public service and financial obligations. In fact, these obligations invariably increase in the aftermath of a disaster.

Almost immediately after a catastrophic event, difficult decisions need to be made by local governments as to how to replenish revenue bases or to otherwise compensate for shortfalls. Reserves and insurance are depleted quickly and recovery may take months or years. Redevelopment of a fully sustaining revenue flow can take a very long time. State and federal assistance can help to some degree, but are often too little, too late or come with cumbersome strings attached. Less than two months after Katrina, New Orleans was forced to cut its city staff by 3,000 people (a 50% cut) and to seriously reduce its services while waiting for assistance through FEMA's Community Disaster Loan Program. A large concern with such decreased resources is how to keep the city safe. They have had to resort to calling in the National Guard multiple times to protect those who have remained.

Another obstacle to a local government trying to sustain its essential services is the reduction in county or city credit ratings that a catastrophic disaster can often cause. This can affect the local government's bonding capacity and other financial resources, making recovery even more difficult. Communities are wise to proactively explore other, quickly implementable strategies that may help to relieve financial shortfalls in the near-term until federal help arrives. (Truesdale, public presentation, 19 April 2006)

Avoiding Erosion of Local Control with Influx of Federal and State Assistance

After a declared disaster event, and especially one of catastrophic proportions, state and federal agencies move in to assist and sometimes take over response and recovery efforts. This is necessary because the very concept of a disaster is that it is an event in which local capacity to respond is exceeded. Local officials, staff, and their families are victims themselves of the disaster event, and help from nearby communities cannot be provided because they are usually impacted as well. A major or catastrophic disaster is also a matter of media and political attention and the Governor and President need to be involved at least symbolically to show support and assure stability (Quarantelli, 2005). While occasionally this sort of outside assistance can create territorial tensions, it is generally welcomed and not questioned. This can become a problem however if some local presence is not integrally involved to guide outsiders on issues specific to the area. It becomes more of a problem if outside control persists beyond response and immediate recovery phases to impact redevelopment decisions. New Orleans, with hardly any local staff left due to an inability to pay them, has been forced to rely on outside assistance in planning redevelopment. With a plan in place prior to a disaster, a community has a better chance of retaining or regaining control of decisions that may have huge implications for its future.

Another erosion of local control occurs through financial assistance. Federal and State grants and loans often come with strings attached. Some of these strings may be beneficial and promote mitigation efforts, but there may be instances where the implications of the assistance are not something the local government and its citizenry wants.

Municipal Insolvency Following a Disaster

As we have witnessed in Louisiana and Mississippi, catastrophic disaster events put a tremendous strain on local economies. There, because of the massive areas rendered uninhabitable for extended periods of time, communities are experiencing a surge in tax delinquencies, bond defaults, bankruptcies and mortgage foreclosures. Unaccustomed to financial emergencies of this magnitude, what do municipalities do when they suddenly become insolvent and the prospects of recovery through traditional revenue sources or tax increases become unlikely?

In Palm Beach County there are 37 municipalities, seven of which have a population of less than 1,000 residents (see **Appendix B**). Many of these incorporated areas are almost entirely residential and their revenue sources would be greatly limited after a disaster. In addition, many of these smaller municipalities cannot offer the services that will be needed during disaster recovery and so the responsibility will fall to the county and state to do so.

Because of their taxing authority, municipalities do not go out of business. Unlike corporations, municipalities are not allowed to liquidate their assets to pay off debts. Municipalities usually craft their plans for adjusting their debts by either refinancing, extending debt maturities, or reducing the amount of

their principal or interest. Municipalities obtain debt financing through two different means: 1) General Obligation Debt backed by the taxing power of the entity; or 2) Revenue Bond Financing involving the dedication of a particular stream of revenues to the municipality's debt service. These options may be limited if the credit rating of the city plummets after the disaster.

A seldom used option for dealing with municipal insolvency is Bankruptcy Protection under Chapter 9. Fewer than 500 governments have filed for Chapter 9 protection since the laws were revised in 1937. The fundamental objectives of Chapter 9 are providing court protection that allows financially distressed municipalities to continue to provide essential public services to their residents while they develop and negotiate plans for adjusting debts. However, Florida has a stricter set of conditions that it imposes on financially distressed municipalities. Failure to pay obligations (wages, retirement benefits, debt service, etc.) or to have sufficient reserves to cover a deficit can bring a determination of "financial emergency" under Florida law and bring the municipality under close state control, including the establishment of an Emergency Board to oversee the operations of the locality and to provide assistance. (Truesdale, public presentation, 19 April 2006)

Use of Local Business Capabilities in the Disaster Recovery Process

Often, businesses and employees remaining in the impacted area after a disaster event continue to have some level of operational capability, but they usually have to sit idly by while outside volunteers and contractors perform recovery work. Where skills and resources are available and intact locally, it makes little sense to wait for outside businesses to complete recovery tasks or for employees to collect unemployment if they are able and willing to be part of their own community's rebuilding process.

Many area businesses provide goods and services which have direct or indirect relevance to recovery needs. Some may require outside assistance in amassing needed equipment and materials or may need a base facility from which to work. Given the proper information prior to a disaster and a line of communication to those in charge of recovery work, many businesses would be able to speed recovery efforts and at the same time reduce their disruption losses from the event. Those companies who are unable to assist in recovery may have skilled employees who could benefit from recovery work until they are able to return to their jobs. Use of a local labor force may minimize the post disaster skill drains that often occur when workers with marketable skills leave to pursue work outside the impact area. (Truesdale, public presentation, 19 April 2006)

2.2 Economic and Private Sector Issues

GOAL: Economic Vitality. Through policy and support of the local business community, Palm Beach County shall work to preserve and restore the industry, agriculture, and tourism that support a high quality of life for its residents.

Availability and Affordability of Property Insurance

As most homeowners in Florida are well aware, property insurance premiums are increasing substantially as adequate coverage becomes harder to find. Many private insurance companies are not able to insure more homeowners in high risk areas and are having to raise rates because of the increased risk during this era of high hurricane activity. Other companies are actually dropping customers and discontinuing coverage in the state. Many homeowners who cannot find coverage in the private market are turning to the public Citizens Property Insurance Corporation created by Florida Statute 627.351(6). However, Citizens itself is having problems making up for its 2004 \$515 million deficit and the likely deficit from 2005. The Corporation is required by law to reduce its exposure through depopulation of its policies but they are being forced to pay private insurers to pick up some of these. In addition, to deal with the deficit, Citizens is assessing all private homeowners' insurers working in the state, which in turn place a surcharge on policy premiums to recoup the assessed amount. This is causing a further financial burden for property owners, even those who are not in high hazard areas. (Insurance Information Institute, 2006)

The Florida Hurricane Catastrophe Fund, a state-run reinsurance pool for high hurricane damage losses, is also running into trouble. Member insurance companies pay premiums into the pool and when losses reach a set trigger level companies pay a deductible to get reinsurance funds. Building construction shortages caused claims to be higher than expected for the past couple hurricane seasons, and the legislature passed changes to the fund in 2005 to lower the trigger level for insurers due to the burden of subsequent storms. These issues, along with massive losses from the 2004 and 2005 hurricanes, have caused the Fund to run out of money. To try to solve this problem, the Legislature increased the bonding capacity of the Fund; however, the bonds are paid for through assessments on insurers in the state, which pass the cost on to their policyholders. (Insurance Information Institute, 2006) While local governments have no direct control over state and private property insurance, these policies have a direct impact on how disaster-resilient and affordable the county can become. Palm Beach County should keep up to date on legislative intentions for property insurance and should make itself heard through local legislators and lobbying organizations such as the League of Cities.

Ability of Small Businesses to Stay Afloat until Adequate Financial Assistance is Available

Business interruptions and failures stemming from disaster events deal a severe blow to local economies in terms of lost productivity and employment. Research from a variety of sources, including the U.S Department of Labor Statistics, consistently reports that 50% to 70% of businesses either never reopen after a major disaster or fail after reopening. Small businesses are represented disproportionately higher

among the business casualties. In Palm Beach County, approximately 80% of businesses have fewer than 10 employees (Truesdale, 2006).

The reasons for post disaster business failures are numerous and complex. The extent of damage to critical production and service capacity, inventory, and capital assets are some factors. Other factors involve the amount of financial resources a business can quickly obtain for recovery; these usually include insurance, reserves, and loans. Time is especially critical to small businesses. Even short periods without cash flow can be damaging. Prolonged interruptions waiting for insurance settlements and loan approvals can be catastrophic. Too often small businesses waste valuable time applying for Small Business Administration (SBA) loans only to be turned down or approved too late. Almost a third of SBA applications are turned down and another 10% are still pending months after applications are submitted. Most businesses receive only a portion of what they apply for. Studies indicate the median percentage of business losses covered by approved loans was about 50%. A major problem involves collateral requirements when homes and workplaces have been damaged or destroyed. Service businesses that rent and have few tangible assets also are at a disadvantage. (Truesdale, public presentation, 19 April 2006).

Small business owners, in a rush to reopen and get back to normal, often fail to consider other business options such as reinventing their business or establishing a new business that better suits the changed post disaster business environment (Alesch & Holly, 2002). This can be especially true for the tourism industry. After a disaster, it may be some time before tourists return to the area in the same numbers that proved profitable before. (Truesdale, public presentation, 19 April 2006)

Avoiding Permanent Relocations of Core Businesses Outside of the Community

As demonstrated by Hurricane Andrew, September 11th, and Hurricane Katrina, virtually all major disasters are accompanied by business relocations, some temporary, but many permanent. These losses can be devastating to local economies. Replacement of key businesses can be extremely time consuming, costly, and difficult.

The effects of post disaster relocations on the Gulf region are not fully understood at this point. New York City suffered an estimated 138,000 displaced jobs after September 11th. It is not clear how much coordination occurred between the public and private sectors regarding these relocations from New York City. Businesses often took care of themselves or relied on the good will and generosity of others in the private sector. For a variety of reasons, many businesses have no plans or intentions of returning to the City. Today, New York City laments the loss of businesses and is struggling to fill the economic void. (Truesdale, public presentation, 19 April 2006)

Regardless of size and financial health, businesses face significant challenges including the inability to operate, employee issues, cost concerns, and the grim prospects for business resumption and long-term recovery. Faced with unusable buildings and equipment, damaged infrastructure, extended outages of

critical services, displaced or victimized employees, and accessibility issues, businesses are faced with critical and time sensitive decisions to make. Concerted efforts need to be made by community leaders to retain core businesses and to support their recovery. Planning needs to occur well before a disaster strikes in order to accomplish this. The availability of temporary workspace and temporary housing for employees may be factors that determine whether a business can stay or leave after a disaster. Workforce development efforts can also entice a company to remain in the area by assuring them that efforts are being made to retain skilled workers and train others. Assistance with business continuity planning before a disaster can also be an effective strategy. (Truesdale, public presentation, 19 April 2006)

Shortage of Contractors/ Supplies Slows Repairing of Homes and Businesses

The high demand for supplies needed to do repair work and the shortages of contractors result in a sharp rise in prices for services and material after a disaster strikes. This can be localized, but in an era of increased hurricane activity, storm damage in one section of the country will divert supplies from other locales. For example, the Gulf Coast area continues to rebuild in the wake of Katrina and Rita, causing construction material prices to soar throughout the country (Christie, 2005). The increases in construction prices also affect the overall real estate market and can negatively impact the availability of affordable homes.

Contractors are stretched thin during a post disaster period. In addition to construction activities, residents seek repair estimates from contractors before accepting their insurance claim settlement. The high demand for estimates and construction tasks translates into long delays before either estimates are provided or work crews are available. In addition to the post disaster demand for building materials, the United States has experienced a surge in construction over the last several years that further reduce available supplies (Insurance Information Institute, 2006). The delays in supplies and contractor services for repairing structures can be very exasperating for residents and business owners who are trying to return their lives and businesses to normal. Many people also become frustrated when they cannot get their building repaired but see new construction resuming after a disaster. Long delays in repairing damaged homes and businesses also put inhabitants of these structures at risk from mold-related illnesses and/or from increased vulnerability to wildfires as embers can more easily enter a structure with damaged eaves or siding (Florida Division of Forestry, 2005). The market should begin to correct for the shortages in supplies as more contractors and suppliers begin to understand the increase in hurricane activity. Incentives for contractors to do small repair jobs before resuming large construction contracts after a major hurricane should be explored as well as increasing contractor classes and offering expedited post disaster training addressing Florida-specific building regulations for out of state contractors coming in to help.

Rapid Restoration of Power and other Private Utilities

As anyone who has lived in Palm Beach County during hurricane season knows by now, recovery from a hurricane really cannot begin until major utilities, especially electricity, are restored. Simply trying to get somewhere in the county can be difficult when most traffic signals are out and curfews due to dark and

dangerous streets are a constant reminder to residents of their inability to return to normal daily life. Power and telecommunication outages keep most businesses from operating and result in large disruption costs that business owners must assume. Telephone and cell phone service disruptions also are a problem during recovery because they prevent people from calling 911 during a period when the most injuries occur. Water and sewer failures also slow recovery, and notifying residents of the need to boil water can be difficult.

In 2004, four hurricanes disrupted power supplies in 62 Florida counties. Telecommunication systems were also affected by hurricane forces. Approximately 18,000 utility crew members were called in from around the Southeast, in accordance with mutual aid agreements. Still, the repair process required more than 2 weeks to complete. Floridians were asked to be patient as the late summer heat made conditions nearly unbearable (Florida Department of Environmental Protection, 2004). More recently, Hurricane Wilma caused power outages to 3.2 million of Florida Power and Light's (FPL) 4.3 million customer accounts. It was the largest outage in company history and required almost 19,000 workers and several weeks to restore power to all customers. (Swartz, 2005) The good news is that through all of the practice at restoring power, FPL and other utilities have learned some lessons and are working to not only restore utilities quicker but also communicate with the public as they are doing so.

A problem with rapid restoration of utilities, though, is that it requires companies maintain the same design as was in place prior to storm destruction (JEA, n.d.). This does not mitigate similar damages from future disaster events, but it does provide comfort to citizens who demand immediate response. Investment in pre-disaster mitigation for utilities is essential and will lead to more rapid recovery. In addition, progressive planning could prepare a utility to be able to replace a component in a timely manner to be more disaster-resilient should it be damaged. Objective analysis of the system's ability to withstand different disaster scenarios would be a good first step in this direction.

Agricultural Losses from Hurricane Damage or Lake Okeechobee Dike Breach

"With an estimated \$1.12 billion in total agricultural sales for 2003-04, Palm Beach County leads the State of Florida, all counties east of the Mississippi River, and its one of the ten largest agricultural producers in the United States" (Palm Beach County/UF-IFAS, n.d.). The county leads the nation in sugarcane and fresh sweet corn production, and it leads the state in agricultural wages at over \$340 million. In 2004, 39% of the county's land, or 493,880 acres, were in agricultural use (Palm Beach County/UF-IFAS, n.d.). According to a recent land use analysis, 16,298 acres of the unincorporated agricultural lands are located in flood zones while all of the acres are subject to high winds from a hurricane (Florida Department of Community Affairs, 2006). The incessant rains associated with tropical storms and hurricanes can cause severe flood damage to crops, as can waters from Lake Okeechobee in the event of a dike breach. The most susceptible areas to either of these issues are located in the western half of the county closest to the lake. Significant damages to crops could have catastrophic economic consequences for farmers, their employees, and the local economy, perhaps even impacting the national food supply. A disaster event could throw the

agricultural sector into upheaval as farms are unable to pay workers, many of whom are likely to relocate. While nothing can really be done to prevent such an agricultural loss, besides the ongoing strengthening of the dike, the government can assist to some degree. Post disaster financial assistance can be quickly moved forward, especially for small farm operations, and conditions can be made that the farms provide assistance to their workers. In addition, disaster assistance programs throughout the county should not ignore the great need farm workers may have after a disaster.

2.3 Social and Environmental Issues

GOAL: Social Justice and Environmental Restoration. Palm Beach County shall promote social equity and environmental quality in all post disaster recovery and redevelopment. Prevention of degradation will be the aim.

Reducing the Incidence of Fraudulent and Unethical Practices

Unfortunately, some people see a disaster as an opportunity to make money sometimes at the victims' expense. Fraud is rampant after a disaster, from internet scams misrepresenting the collection of donations to volunteers stealing donated items as seen recently in the Katrina Red Cross scandal (CBS News, 2006). Price gouging is also a common occurrence, although the State of Florida passed a law after Hurricane Andrew prohibiting price gouging after a declared disaster and set up a hotline for reporting any occurrences (Florida Attorney General's Office, n.d.). There also are problems with unlicensed contractors taking people's money without finishing the job or doing it correctly. Last year, the State issued badges to insurance adjusters to prevent hurricane victims from being taken advantage of by imposters (Insurance Information Institute, 2006). The insurance companies, FEMA, and the Red Cross are often victims of fraud themselves as well since with every disaster event people who do not deserve disaster assistance or insurance payments make fraudulent claims. These activities have the potential to negatively impact true disaster victims because some forms of assistance may be used up before they can be helped or the procedures for claiming assistance must become more rigorous. This could keep some people from being able to obtain assistance as quickly, or at all. This also creates more desperate disaster victims who may fall prey to predatory lenders as they try to make ends meet financially.

Another unethical practice involves the real estate market. Speculators often pounce on an impacted coastline and offer quick money to devastated homeowners who either do not understand the true value of their property after a disaster or are so upset from the situation that they hastily wish to move far away to somewhere that seems safer (Musgrave, 2004). This is especially an issue for low-income and/or minority coastal communities. There is a constant pressure of gentrification in these areas even before a disaster but many of the residents are unwilling to sell because their family has always lived there or because of the sense of community they find there. After a disaster, left with very few possessions and perhaps unemployed, some see no choice but to sell. This is currently taking place in the Gulf Coast in places such as Biloxi, where working class bungalow neighborhoods along the coast are quickly disappearing (Apuzzo,

2005). The area is losing historic and unique neighborhoods, while a majority of the residents are not receiving fair compensation for their properties. Education prior to a disaster and available assistance after a disaster is needed in all these instances. If outreach centers and hotlines are available to give people advice on what their options are, many may not be misled into a decision they will regret later.

Individual's Role in Preparing for and Recovering from a Disaster

The new buzz phrase introduced by the White House surrounding public disaster awareness is a “culture of preparedness.” The federal Lessons Learned Report recognizes that “A Culture of Preparedness must build a sense of shared responsibility among individuals, communities, the private sector, NGOs, faith-based groups, and Federal, State, and local governments.” It states, “Individuals must play a central role in preparing themselves and their families for emergencies (The White House, n.d.).”

If individuals can become more prepared before a disaster strikes then the recovery process can be accelerated. Simple things, such as preparing a survival kit with a 10 day or more food and water supply, having a family evacuation or shelter plan, and businesses preparing continuity plans, could result in a less chaotic response period and allow government leaders and emergency managers to begin recovery efforts sooner. In addition, individuals or businesses could speed recovery if they had savings for a disaster situation so that they could make repairs or acquire temporary or new permanent accommodations before assistance or insurance payments were made available. On the federal level the creation of tax-free personal disaster savings accounts is being considered. (Insurance Information Institute, 2006) This would allow assistance to be targeted for those more in need that lack the financial ability to possess insurance or savings prior to a disaster event.

Adequate Health and Mental Health Services Available During Recovery

Local health and mental health facilities and services can be compromised and may not be readily available following a disaster event. However, these services are critical and present an immediate need following a disaster. It has been documented that most hurricane-related deaths and injuries actually occur after the storm has passed during cleanup activities. There are numerous public health concerns in the post-disaster environment, including unsafe drinking water, carbon monoxide poisoning from improper operation of generators, lack of access to medications, and contaminated food supplies, among others. Unfortunately, there will likely be fewer health professionals to handle these issues and the increased occurrence of injuries. Securing assistance of doctors and nurses from hospitals or clinics in unaffected jurisdictions of the state will be vital to providing health services. (Hurricane-related Information for Health care Professional, n.d.)

Counseling is also a major need after a disaster as people try to cope with their losses. Depression and domestic abuse are often much higher after a disaster. Drugs and alcohol are sometimes employed as a means to handle stress and trauma, opening the door to possible abuse. Mental health workers are rarely sought out by disaster victims, for the daily recovery and clean-up tasks are a top priority. Thus, assistance

needs to be offered in the community and social institutions should be restored quickly to provide structure to those suffering. Also, services provided should be catered to the specific area to best serve the citizens. A last, and often overlooked, concern is the relief workers themselves. These individuals are also working under stressful conditions and are susceptible to a reduced level of mental health. The county can explore the outreach potential of national organizations, such as the American Psychological Association.

Restoring Educational, Cultural, and Historic Amenities

Palm Beach County has many amenities that add to the quality of life found here and could be impacted by a disaster. Educational opportunities are certainly one of these amenities that should be restored to permit a full recovery by the county after a disaster. Palm Beach County contains campuses of eight institutions of higher learning, with Palm Beach Community College, Florida Atlantic University, and Palm Beach Atlantic University being the largest. The colleges and universities in the Gulf Coast area have been struggling since Hurricane Katrina. Most students were forced to transfer to other colleges, at least for a semester, or take a semester off. Returning to prior enrollment rates is a problem for these colleges and has stunted them financially as well. The amount of research lost from the event is also a tragedy and a loss of revenue for these schools.

The County also boasts of many cultural and historic amenities that cannot be forgotten during long-term recovery efforts. There are numerous theaters and museums, such as the Kravis Center and the Norton Museum of Art. Historic sites and museums are also abundant and irreplaceable. Another major amenity that should be protected and restored from disaster impacts is the park system in the County. If these amenities are neglected in long-term recovery efforts then repopulation of the area and resumption of tourism will greatly suffer.

Coastal and Aquatic Restoration

Coastal erosion is a constant and familiar occurrence which is exacerbated by disasters. Average annual erosion rates along the Atlantic shoreline range from 2 to 3 feet. This is a larger concern for barrier islands, which absorb the brunt of wave energy and experience increased erosive processes. The Florida Department of Environmental Protection categorizes all shorelines in Palm Beach County as “critical” when addressing erosion problems. Coastal storms and hurricanes can change the shoreline dramatically in a short period of time. In addition to sand erosion, coastal storms can also strip away protected mangroves and cut swaths through productive wetlands. Again, barrier islands are the most susceptible to erosion, as storm surge pushes sand beyond the dune system in a process sometimes referred to as the island “rolling over itself”. Sand overwash is problematic for coastal land owners because it can inundate properties and increase vulnerability by removing the beach as a defensive barrier (Beatley, et. al, 2002). Damaged coastal wetlands and mangroves can also increase vulnerability of coastal development and increase erosion. Storms can also scour the sea floor causing damage to coral reefs, which are already threatened by human activity and increased water temperatures.

In Florida, the Coastal Construction Control Line is intended to prevent development seaward of the extent of erosion caused by a 100-year storm. It is currently being readdressed by the State to determine if the line needs to be moved. Hardening practices, such as engineered jetties, groins, and seawalls, only exacerbate the problem, trading short-term protection for increased erosion rates in the long term (Beatley, et al, 2002). Nourishment projects are the most commonly used method to counter natural erosion. The Palm Beach County Department of Environmental Resources Management has project designs approved by the Florida Department of Environmental Protection for nourishment, dune restoration, and stabilization. They also have pre-approved upland sand sources that can be used as soon as possible after a storm for these projects (D. Bates, personal communication, June 22, 2006). These preparations for responding to erosion are essential but after a disaster, the possibility of larger setbacks or land acquisition should also be considered for a longer-term solution to areas of severe erosion. Whereas, impacted wetlands and mangrove stands may require widespread re-planting projects for shore stabilization.

Water Pollution from Sewer System Failures

Sewer system failures in the aftermath of a major disaster are commonly attributed to pump station electrical outages. In areas of little relief and flat topography, pump stations are needed to move waste to the treatment plants. Another concern during a hurricane event is wastewater outflow. When a treatment plant exceeds capacity with inordinate amounts of stormwater inflow, intake lines overflow into surface waterbodies. In each case, inability to treat wastewater will result in the pollution of natural resources and warnings to avoid waterbodies for economic and recreational purposes. The contaminants typically include bacteria, nitrates, metals, trace quantities of toxic materials, and salts. These contaminants can destroy productive aquatic habitats. Humans also must avoid contaminated waters, as bacteria can spread disease from the ingestion of microorganisms such as *E. coli*, *Giardia*, *Cryptosporidium*, and Hepatitis A (Oregon State University Extension Service, 1997). In Palm Beach County, where tourism is a major part of the economy, contaminated waters can result in beach closures and fishing prohibitions. Such orders can last days or weeks depending on the severity and quantity of the contamination. Of particular concern are low-income individuals who often fish for their meals in county waterways. Addressing weaknesses in the systems prior to a disaster and using generators or other means to prevent water pollution is, of course, ideal. When pollution does occur after a disaster, rapidly identifying the source and stopping it are the main courses of action in addition to notifying the public and monitoring the situation.

Increased Fuels for Wildfires on Conservation Lands

Palm Beach County has been more vulnerable to wildfires in recent years because of hurricane debris that has not been cleared out of natural areas and vacant properties. The 2004 and 2005 hurricane season resulted in widespread destruction to vegetation throughout the county. On many conservation and vacant lands, these downed trees have since dried out and become dangerous wildfire fuels. Man-made debris, which accumulates in the forest lands, can contain toxic materials and increase fire intensity. The tangled debris in area forests also create "ladder fuels" which enable a forest fire to climb from the ground level to the tree crowns where it becomes much more intense and difficult to suppress as embers can be blown

farther. Where trees have been toppled, removing the crowns, ground-level wind speeds increase, resulting in rapid rates of fire spread. (Florida Division of Forestry, 2005)

The hurricane debris also hinders suppression by Division of Forestry and local firefighters. One of the main wildfire suppression strategies is to create fire lines using tractors to contain the fire. The size of the downed trees and the way they have become piled on the ground make it difficult to plow a fire line and navigating through the debris slows down the process. These obstacles can also be a safety hazard for fire fighters retreating from a blaze. While wildfires are always a concern in Palm Beach County forests, the large increases in dry fuels have greatly increased the vulnerability of area homes. (Yunas, public presentation, 22 March 2006) To deal with the increased risk of wildfire that can occur after a hurricane, prior planning, education, and a coordinated strategy to reduce the added wildfire fuels are recommended strategies.

Unhealthy Levels of Mold in Damaged Structures

Mold has been a noted problem after all of the recent hurricanes because excessive mold growth often starts in homes that have been flooded or have leaks due to wind damage. New Orleans has been a worst case scenario for mold contamination since 60% to 80% of residential structures there sustained severe flood damage. (Centers for Disease Control and Prevention, 2005) The extended flooding and the delay in cleanup after the flood waters had receded has resulted in such high levels of mold that some structures must be demolished or completely gutted. In most post storm situations, there is not prolonged flooding but mold can still become a health issue if not treated quickly and properly. A study done in Central Florida after the 2004 hurricane season found 38% of structures tested to be contaminated with the *Stachybotrys* mold genus which is associated with high water damage and produces dangerous mycotoxins (Cortes, 2005).

There are many species of mold that can cause respiratory infection and immunosuppressed people have a higher risk of infection. More commonly, mold can cause allergic reactions and hypersensitivity. It is assumed that higher levels of mold and longer exposure will result in more illness but at this time there is no standardized method to measure mold exposure and there are no defined safety levels for specific mold species. (Centers for Disease Control and Prevention, 2005) It is generally recommended that all visible mold should be cleaned from inside structures using proper protective gear and that certified professionals should be used to clean extensive mold damage. Property owners must be careful of mold remediation scams, however. Representative Domino from West Palm Beach introduced a bill in 2005 and again in 2006 to the Florida House to require mold remediation professionals to be certified as many other states have already done. Palm Beach County can work to educate homeowners and employers of the health risk for anyone exposed to mold for extended periods. Renters and employees can also be empowered through education so that they do not impair their health due to the negligence of the property owner. Preventing mold from getting a foothold in a structure is the best solution and can be accomplished through education in addition to speeding repairs to structures as discussed in **Section 2.2**.

2.4 Redevelopment and Mitigation Issues

GOAL: Disaster Resilience. Palm Beach County shall endeavor to redevelop in a sustainable manner by institutionalizing hazard resilience and mitigation. Public participation and the efficient use of public funds will be standard features of redevelopment.

Ability to Rebuild Stronger Structures

Recent hurricane impacts highlight the value of stronger building codes since most of the severely damaged structures were built prior to Hurricane Andrew when new building codes were developed. After Andrew, the insurance industry created the Institute for Business and Home Safety (IBHS) which has been educating people on mitigation techniques and studying ways to further enhance structures' ability to withstand hurricane force winds (Insurance Information Institute, 2006). Also, the State legislature adopted a statewide Florida Building Code (FBC), which recognized the threat of hurricanes and the need to harden structures against such events. Broward and Miami-Dade Counties operate under a slightly different code, including a higher wind load standard than Palm Beach County follows. Given the predicted increase in occurrence and intensity of hurricanes in the coming decade, the county would be wise to seek permission to raise its wind load standard to the same measure.

Though the county is unable to independently alter the code, as new advances in construction take place, Palm Beach County and its municipalities can encourage the legislature to increase the stringency of the FBC. The county analyzes areas impacted by storm events to record the effectiveness of the FBC versus those structures erected prior to adoption of the more stringent code (R. Caldwell, personal communication, May 11, 2006). This program should be continued and its findings used to justify the need to assist homeowners of substandard housing. Policy guides what level of damage to a structure warrants bringing a structure up to current codes. Currently the FBC and Palm Beach County's Comprehensive Plan (Coastal Management Element Policy 2.5-b) require a structure that is damaged 50% or more of its value be brought up to code during repairs (Palm Beach County, 2005). An incentive for voluntary strengthening of structures beyond code is another way the county could build in disaster resilience. Model homes for the IBHS Fortified for Safer Living program cost from 4% to 9% more to build, but surveys show that on average people are prepared to pay up to 6% more for a disaster-resistant dwelling (Insurance Information Institute, 2006). However, the current real estate market in Palm Beach County makes any increase in housing costs another hurdle to those seeking affordable housing. Education on the benefits of stronger building codes should be a priority during reconstruction efforts. The FBC will be required of new and rebuilt structures, but education programs can motivate homeowners to take the next step toward disaster resilience.

Ensuring Strong Code Enforcement

After Hurricane Andrew, questions were raised as to why there was so much destruction if South Florida had some of the strongest building codes in the country. A Dade County Grand Jury determined that lax

code enforcement was a major culprit. Experts estimated that between 25% and 40% of the losses were avoidable. (Insurance Information Institute, 2006)

Since Andrew, the Insurance Service Office has developed a building code effectiveness rating for local governments which takes into account such things as the building code enforcement budget and the qualifications of building inspectors. This Building Code Effectiveness Grading Schedule (BCEGS) is then taken into consideration in determining property insurance rates. (Insurance Information Institute, 2006) In the rush to rebuild, there is always the possibility that lax code enforcement could again come into play and could hinder efforts at disaster resilience. The BCEGS grade is only reevaluated every five years by the Insurance Service Office. To make sure standards do not slip between grading and in the busy rebuilding phase after a disaster, the County and municipalities could require internal reports to the commission or council annually along with specialized training for code enforcement officers on mitigation issues. It is also important to make sure that non-local inspectors who may be brought in to assist after a disaster through a mutual aid agreement are as well trained in the FBC and as stringent as local inspectors. In addition, making sure only certified contractors who are also trained in the FBC and the latest mitigation techniques are employed in the county will assist the county in achieving disaster resilience.

Communicating with and Involving the Public in Recovery and Redevelopment Issues

“At no time is the opportunity for public involvement in decision making greater than when a community is faced with the practical problems of recovering from a disaster (Natural Hazards Center, 2001).”

Redevelopment after a disaster opens up many opportunities to change problems that existed in the community before the disaster as well as simply rebuilding. Citizens must be involved in these important decisions if the community wants to better itself and avoid a disenfranchised citizenry in the future. “Public buy-in is essential to avoid making decisions in the immediate aftermath of a disaster that may compromise what the community might achieve in the long term (Natural Hazards Center, 2001).” A participatory approach to making redevelopment decisions is not easy, however, and will require time and resources. Also, if the public is going to be asked for their input, there should be an actual desire to use the input in the plans and not simply disregard it. Community involvement is not feasible in the immediate recovery stage after a disaster due to communication, mobility, displacement, and basic needs constraints. The media and community outreach centers, though, can be used to advertise the intent to involve the public in decisions once recovery is further along. Simply keeping the public updated on what decisions have or have not yet been made will promote involvement. Also, awareness programs prior to the storm can make citizens aware of the recovery timeline that may occur after the storm.

In the Gulf Coast, community-based recovery and outreach centers have been created through assistance from non-governmental organizations to try to receive input and educate citizens on recovery efforts. Poor communities have been the targeted audiences for these outreach centers. Also, due to so many residents still being displaced far from their cities and homes, efforts have been made to involve these people as well

(Oxfam America, n.d.). Recovery outreach centers and alternative means of communicating with displaced persons must be considered should Palm Beach County ever experience a disaster as well. A visioning process guide found in **Appendix D**, goes into more detail on how the public can be included in planning redevelopment.

Limiting Redevelopment in Hazardous Areas

Decisions on locations of allowable redevelopment will set the stage for future disaster events. In this regard, post disaster redevelopment is the connection to the community's mitigation efforts. Citizen demands can create political pressures to allow a complete recreation of that which was destroyed. Allowing complete reconstruction can ease the administrative hassles that typically accompany limitations on development, such as moratoria or increased setbacks. However, allowing wholesale redevelopment foregoes the opportunity to reassess the hazard exposure and vulnerability of commercial and residential areas, as well as the locations of public infrastructure. Other missed opportunities include, implementing mitigation initiatives, increasing public safety, and fulfilling a previously formulated vision for community redevelopment (FDCA, 2006). Allowing redevelopment in areas that have been destroyed without including enhanced mitigation, or at least assessments, puts the burden of paying for disasters on taxpayers who have to assume some of the response and recovery costs from those hazardous development decisions. New Orleans is currently in a heated battle over allowing redevelopment everywhere, as Mayor Nagin promises his constituents, or creating smart land use patterns that replace development in extreme hazard areas with green space as an advisory committee suggests (Roberts, 2006). Policies created prior to a disaster addressing how the local government will handle this issue can lessen the political influence on such decisions and allow for more rational and disaster resilient choices. Public participation in redevelopment decisions is key and can be carried out through a visioning process during the post disaster recovery period (see **Appendix D**). The Florida Department of Community Affairs is prepared to assist with expedited review of land use amendments, allowing the county to act quickly during redevelopment. Securing funding for strategic land acquisition after a disaster is also essential.

Including Mitigation in Rebuilding

After a disaster, there may be a rush to rebuild as people wish to return to normalcy. Often in this rush, they bypass opportunities to include hazard mitigation so that the same destruction does not happen again. During this period of increased hurricane activity, it is imperative that people realize the benefit of mitigating the problem rather than just rebuilding exactly as before. Education and financial assistance are essential to including mitigation in rebuilding. Many people may not be aware of simple or cost-effective mitigation techniques that could be included as they repair their homes and businesses. Others may be aware of mitigation solutions but do not have the financial means to include them. Addressing these gaps is both a pre disaster and post disaster concern. The LMS addresses education campaigns for hazard mitigation prior to a disaster. It is after a disaster, when a homeowner already has to make repairs or rebuild, that they may be more approachable about including mitigation. Reaching these people quickly before they begin rebuilding is necessary and could be done by providing education material and experts to answer questions

at recovery outreach centers and local hardware stores. Also, education of contractors so that they inform property owners of mitigation techniques that could be used, is a good outreach method. Offering grants and loans for the added cost of mitigation is another way to encourage inclusion of mitigation during redevelopment.

Including Affordable Housing in Redevelopment Projects

Affordable housing is already a big issue in Palm Beach County. A loan to purchase a median priced home (\$411,400 in August 2005) requires an annual income of over \$100,000 while the median family income in Palm Beach is \$62,000. (Truesdale, public presentation, 19 April 2006) A disaster event can only exacerbate the problem as affordable structures are often older and not built to current codes or are mobile homes, and these residences are disproportionately damaged during a hurricane. Therefore the need for affordable housing after a disaster is even greater than it usually is and can become a socioeconomic crisis if not proactively dealt with. Redevelopment projects not only need to include some affordable units but they need to include a realistic proportion to meet the needs of residents and the economy. A lack of affordable housing can greatly affect an economy such as Palm Beach County's that is heavily service oriented. If after a disaster, workers for the tourism and other service industries are displaced because they have no affordable housing options to return to then those businesses are going to suffer or possibly fail. An impact such as this to the local economy can alter the quality of life in the area and greatly affect the community's ability to recover from the disaster and return to a future of growth. Palm Beach County developed a vision for its land use planning efforts many years back that revolved around maintaining a diverse community that included urban and rural communities and all levels of income households. To maintain that vision after a disaster means that affordable housing must be seriously addressed.

Disaster-Resilient Public Funding Decisions

The public expenditure of funds on capital improvements, such as roads, wastewater treatment and other public facilities, in hazard areas can sometimes facilitate growth, thus increasing the population exposed in hazard areas. Repairing existing infrastructure that supports development in hazardous areas spreads the burden of paying for possibly repetitive repairs due to hazard damage to all of the taxpayers and subsidizes those who choose to live in the hazardous area. These public funding decisions impair the ability of the county to become more disaster-resilient and are not efficient uses of public money. Of course, in most cases repairs must be made to infrastructure damaged by a hurricane simply because the development already exists and services cannot be denied to those residents. Subsidizing those who live in the hazard area may be optional, however. Special taxing districts could be created for areas with recurring funding needs for hazard damage. Also, after a disaster outside assistance from the state or federal government may be available to make it feasible for the local government to make a more disaster resilient choice. Outside money may be available to undertake projects that were previously considered infeasible financially, such as elevating a damage-prone road, relocating a police station, or flood-proofing a sewage treatment plant (Natural Hazards Center, 2005). Having a current assessment of at-risk public facilities and

mitigation options or alternative locations that could be employed for each could make post disaster decisions about how to use funding more disaster resilient.

3. PLAN IMPLEMENTATION

3.1 Activating the Plan

The decision to activate the post disaster actions contained in **Section 4** will be made by the Executive Policy Group in concert with the recommendations of the PDRP Executive Committee members and the Recovery Branch Chief. Implementation of pre disaster actions does not require activation of the plan and these should be implemented as soon as possible to prepare for the next disaster. The need for activation can be anticipated prior to the storm or determined during the response stages after the storm as damage assessments become available. The PDRP can be activated for disasters of any size but the amount of actions necessary will depend on the level of the disaster. Many recovery and redevelopment tasks are appropriate regardless of the scale of the disaster if a rapid recovery is desired. Others, however, may only be required if a major or catastrophic disaster occurred in Palm Beach County. In the post disaster action tables in **Section 4**, the level of disaster that would most likely trigger that action is noted. The disaster scenario levels used in this Plan are minor, major, and catastrophic. **Table 3.1** provides some subjective guidance for deciding if a minor, major, or catastrophic disaster has occurred. These descriptions are not meant to provide legal authority or replace any established disaster definitions, such as those used by the State of Florida or FEMA found in **Appendix A**. In addition, any numbers used in the descriptions are to give the user an idea of the magnitude of impact being described but are not to be used as a cut-off point by any means.

Once the PDRP has been officially activated for post disaster action, all members of the PDRP Executive Committee should be notified of the activation level by the Committee Chair. The chairs of the Working Groups discussed in the next section should convene their groups and oversee implementation of the actions assigned to that group.

The decision to deactivate the post disaster period of the PDRP and resume pre-disaster actions should be decided by a vote of the PDRP Executive Committee and then recommended to the Recovery Branch Chief and Executive Policy Group for official deactivation. The post disaster phase should be deactivated once all applicable post disaster actions listed in **Section 4** have been accomplished and the working groups feel there are no additional actions needed or when recovery and redevelopment has reached a satisfactory end regardless of whether all actions have been completed. The length of time the plan is activated will depend on the level of the disaster, and when to terminate activation will be a subjective decision that can be decided by the expertise of the Executive Committee.

Table 3.1 Characteristics of Minor, Major, and Catastrophic Disaster Events

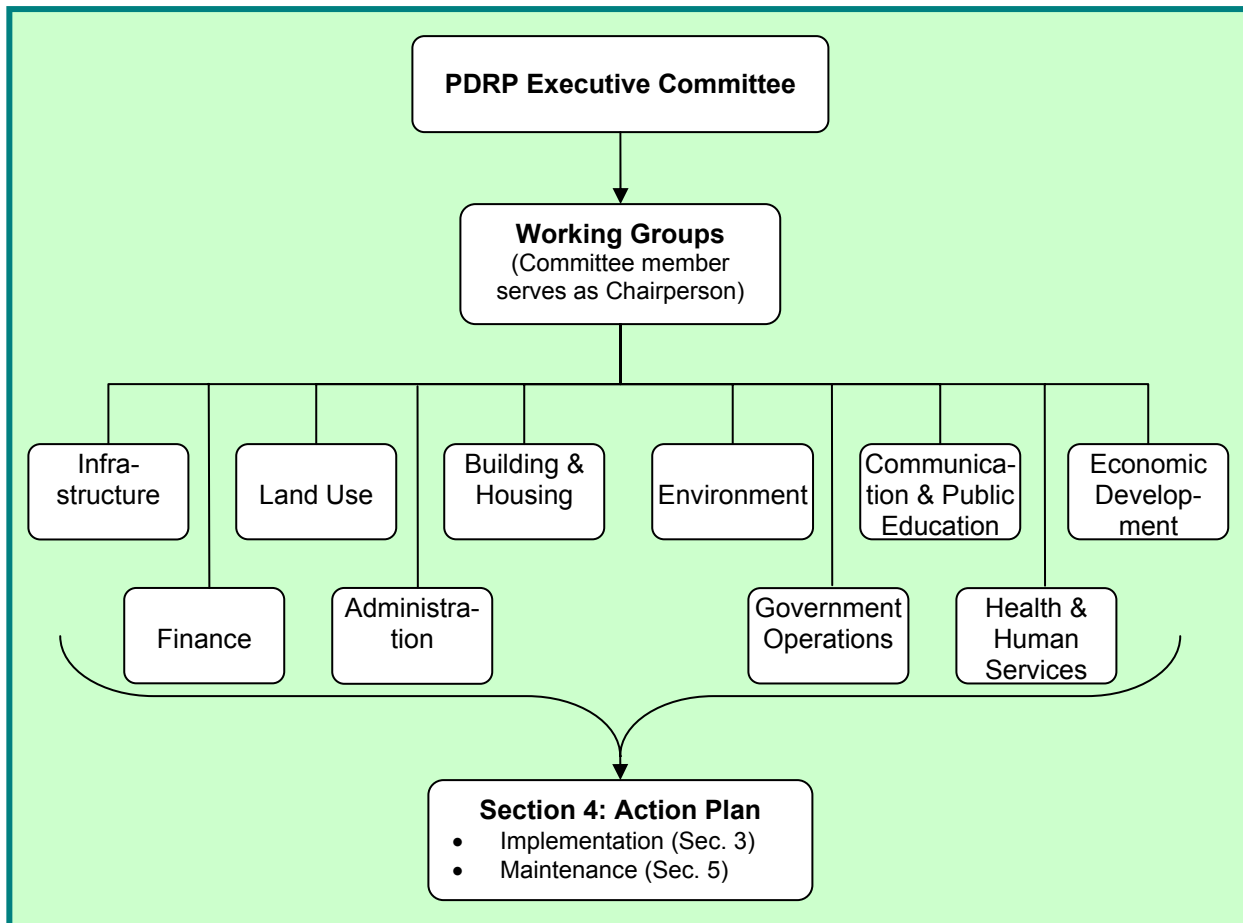
CATASTROPHIC DISASTER	MAJOR DISASTER	MINOR DISASTER
<i>Most likely would be caused by:</i>		
<p>Category 4 or 5 hurricanes: Winds 131 MPH and higher, Surge 13 feet and greater A direct hit by storms of this magnitude will cause immense destruction in the County.</p>	<p>Category 2 and 3 hurricanes: Winds between 96 and 130 MPH, Surge between 6 and 12 feet.</p>	<p>Tropical Storms and Category 1 hurricanes: Winds up to 95 MPH, Surge up to 5 feet.</p>
<i>May exhibit some or all of the following:</i>		
<p>Approx. \$50 billion or more in estimated losses. TAOS models of the County calculate Cat. 4 & 5 storms will cause this much in surge and wind damages. (Palm Beach County, 2004)</p> <p>More than 25% of housing is destroyed or not habitable. With such a severe reduction in housing stock much of the population will at least temporarily relocate. This could lead to workforce shortages which slow economic recovery and reductions in the tax base which limit local governmental functions.</p> <p>Most or all of the community’s structures are impacted in some way. This places a strain on the construction industry and local government building and planning staff, as well as making it difficult for anyone to return to normal daily operations.</p> <p>Most government operational centers are inoperable and County EOC is severely impacted. This causes an organizational hurdle for recovery operations. Government should provide assistance to citizens in a time of need, but when they are also victims the response effectiveness is hampered.</p>	<p>Between \$10 and \$50 billion in damages, approx. The TAOS model calculates the dollar figures through a comparison of parcel data with wind and storm surge damage from Category 2 and 3 hurricanes. (Palm Beach County, 2004)</p> <p>5-25% of housing is destroyed or not habitable. A greater percentage of the population can return from evacuation, however shelters will remain overburdened. Also, some workforce shortages will slow recovery efforts.</p> <p>A majority, but not all, of the built structures are impacted. With a reduced number of impacted structures, reconstruction crews can make repairs quicker and since more habitable structures remain, repopulation can occur more quickly.</p> <p>Government operational centers are severely impacted and County EOC is partially impacted. The EOC can remain the center of operations with minor repairs, however, other government locations will need work before they can be reopened causing a delay in services.</p>	<p>Up to approx. \$10 billion in losses. With so much population and development centered on the coast, damages are difficult to avoid. However, the TAOS model calculates that a Category 1 storm is likely to have a far reduced amount of property impact. (Palm Beach County, 2004)</p> <p><5% of housing is destroyed or not habitable. Population displacement is not as extreme. Citizens are easily able to return from a local shelter or short evacuation. Issues of repopulation and employee loss are minimal.</p> <p>Less than half of all built structures are impacted in any way. Local contractors are able to handle the repair and construction demands. Residents can return to or remain in their homes.</p> <p>Government operational centers are slightly impacted, but operational. Public facilities will remain fully operational and experience few effects from Category 1 hurricanes or tropical storms.</p>

<p>More than 75% of electric utilities are inoperable for 4 or more days. Electricity outages affect residents' everyday life and limit commercial activity. Without electricity, street lights are inoperable and curfews continue to be enforced. Non-functioning traffic signals are also a hazard and consume police personnel hours.</p> <p>Communication is not operational due to damaged telecommunications systems. Severely hampers recovery activities. All utility companies will be affected by a lack of personnel and reliant on outside help.</p> <p>Extensive shortages of water and extended "boil" orders as well as environmental impacts from sewer system failures. Lack of potable water is a major inconvenience for residents and boil water notices are often confusing for the public. Sewer system failures pollute waterways and require beaches to be closed.</p> <p>Roadways, railroads, and the airport are severely damaged, public transit is not in service for 10+ days, and gas shortages are widespread for 4+ days. Transportation disruptions prevent the inflow of supplies, slow the response times of those providing assistance, and stop citizens from returning to work.</p> <p>Local inter-governmental assistance is not an option. The size of the event and range of its impacts prevent neighboring jurisdictions from assisting. Distant or out-of-state personnel must be called upon.</p>	<p>50 - 75% of electric utilities are inoperable for 4 or more days. Telecommunications are heavily damaged, but remain partially operational. Fewer electrical outages or those lasting fewer days mean fewer inconveniences, safety hazards are reduced and work crews can correct the problems quicker than during a catastrophe. However, a great amount of external personnel will be utilized to repair both systems.</p> <p>Some impacts to water utilities and limited sewer system failures. Boil water orders are required for limited portions of the population and are short in duration. Some pump stations are temporarily down.</p> <p>Transportation is largely functioning within a week, once debris is cleared and minimal repairs complete. Response supplies can reach the destination with minor delays. Debris removal and sufficient employee power are the major impediments to restoring transportation operations.</p> <p>Inter-governmental assistance must be utilized to fill personnel voids. Mutual aid agreements will be utilized. Personnel can not come from neighboring jurisdictions, but does not require out-of-state entities.</p>	<p>0 – 50% of electric utilities are inoperable for 4+ days. Telecommunications are disrupted intermittently throughout the clean up process. Public safety concerns are nearly non-existent. The major concerns are those of convenience, but local crews can quickly restore power to the grid.</p>
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3.2 Implementing the Plan through Working Groups

The PDRP Executive Committee is responsible for coordinating implementation of the Plan, including pre-disaster and post disaster actions. To do this in an efficient manner, a working group structure has been created to function under the Executive Committee’s direction. **Figure 3.1** illustrates the working group organizational structure. Due to the large amount of intergovernmental coordination needed and the breakdown of normal routines during the post disaster period, the working groups are intended to create a flexible framework that cuts across departmental and jurisdictional boundaries to effectively carry out the Action Plan. Each Working Group will cover a major topic of concern for local governments after a disaster. The post disaster issues discussed in **Section 2** have been divided among these Working Group topic areas and are presented in **Table 3.2**. Some issues, due to their broad nature, have aspects that fall under two working groups, such as temporary housing which needs sites identified that have taken into account possible long-term land use issues but also has many administrative actions needed. In the action tables in **Section 4**, each action identifies the Working Group responsible for taking the lead in its implementation.

Figure 3.1 PDRP Executive Committee and Working Group Organizational Structure



The membership of each working group is set up to be flexible so that as expertise is needed on a particular task or staff turnover changes membership, the working group can adjust and function. This is particularly important in the post disaster period when the staffing situation may change and job duties will most likely be different. Each working group has a chairperson, which is also a member of the PDRP Executive Committee. The current Working Group Chairs are listed in **Table 3.2**. The Chairperson of each working group is responsible for inviting other members appropriate for that particular topic. **Appendix D** includes a table of suggested agencies and departments that may be useful to each working group. Municipal representatives in working group activities will be coordinated by the League of Cities in concert with the working group chairpersons. The Working Group Chair decides when and how often the Working Group needs to meet, although during activation of the PDRP there will obviously be a greater need.

The Working Group's main purpose during implementation is to assign actions that it is responsible for to the appropriate staff to work on. For post disaster actions, this can be done tentatively prior to the hurricane season; however, it should be addressed again if the Plan is activated to ensure that those people can indeed do the work. The Working Group also must oversee that there is progress on implementing the actions for which it is responsible and report the status periodically to the Executive Committee. During pre disaster or non-activated periods, the Executive Committee should meet at least once prior to the hurricane season. This is discussed in more detail in **Section 5**. During activation of the Plan, the Executive Committee Chairperson will determine when the Committee needs to meet, but might also request frequent status reports from the working groups, which can then be distributed to the Committee members in between meetings.

Table 3.2 Working Group Responsibilities and Current Chairperson, 2006

Working Group	Issues Covered	Current Chairperson
Infrastructure	<ul style="list-style-type: none"> • Critical Infrastructure and Facility Repair • Rapid Restoration of Power and other Private Utilities • Debris Management and Disposal 	George Webb
Land Use	<ul style="list-style-type: none"> • Disaster-Resilient Public Funding Decisions • Debris Management and Disposal • Limiting Redevelopment Hazardous Areas • Availability of Temporary Housing/ Long-term Sheltering 	Carmen Annunziato
Building and Housing	<ul style="list-style-type: none"> • Shortage of Contractors/Supplies Slows Repairing of Homes and Businesses • Availability and Affordability of Property Insurance • Ability to Rebuild Stronger Structures • Ensuring Strong Code Enforcement • Including Affordable Housing in Redevelopment Projects 	Vacant
Environment	<ul style="list-style-type: none"> • Coastal and Aquatic Restoration • Water Pollution from Sewer System Failures • Increased Fuel for Wildfires on Conservation Lands • Unhealthy Levels of Mold in Damaged Structures 	Richard Walesky
Communication and Public Education	<ul style="list-style-type: none"> • Individual's Role in Preparing and Recovering from a Disaster • Including Mitigation in Rebuilding • Communicating with and Involving the Public in Recovery and Redevelopment Issues • Reducing the Incidence of Fraudulent and Unethical Practices 	Chuck Shaw
Finance	<ul style="list-style-type: none"> • Disaster-Resilient Public Funding Decisions • Avoiding Erosion Local Control with Influx of Federal and State Assistance 	Richard Roberts
Administration	<ul style="list-style-type: none"> • Use of Local Business Capabilities in the Disaster Recovery Process • Including Mitigation in Rebuilding • Availability of Temporary Housing/Long-term Sheltering 	Verdenia Baker (Tom Serio)
Government Operations	<ul style="list-style-type: none"> • Municipal Insolvency Following a Disaster • Sustaining Essential Governmental Services in the Face of a Post Disaster Economic Crisis 	Tony Smith, J. Titcomb, & L. Hodgkins
Economic Development	<ul style="list-style-type: none"> • Ability of Small Businesses to Stay Afloat until Adequate Financial Assistance is Available • Preventing Permanent Relocations of Core Businesses Outside of the Community • Restoring Educational, Cultural, and Historic Amenities • Agricultural Losses from Hurricane Damage or Lake Okeechobee Dike Breach 	Kelly Smallridge & Kevin Johns
Health and Human Services	<ul style="list-style-type: none"> • Adequate Health and Mental Health Services Available During Recovery • Fair and Equitable Distribution of Disaster Assistance 	Claudia Tuck

4. ACTION PLAN

To assist in implementation of the PDRP this section briefly lists actions for post disaster recovery and redevelopment in a matrix format. The actions listed in this section are not exhaustive of everything that should or could be done leading up to or following a disaster event. It is inevitable that as Palm Beach County gains new experience with disaster recovery, and as we deal with the uniqueness of a disaster event, additional recovery and redevelopment actions will be needed. Some of the actions in this section are one-time occurrences, meaning once the task has been accomplished it can be marked off. The matrix format of this section, which is kept in a separate electronic spreadsheet file, should assist in easily updating the actions of the PDRP. Completed actions that do not need to be implemented every time there is a disaster event can be removed from these tables and placed in **Appendix C** as a record of accomplishments. New actions can be added and the list can easily be resorted by one of the fields to meet the needs of any user of the Plan. More information on maintenance of the PDRP is found in **Section 5**.

The Action Plan is divided into short-term and long-term recovery/redevelopment and into pre-disaster and post disaster actions. This results in four action matrices that are each sorted by the Working Group responsible for implementation. The actions can also be found in **Appendix E** in a unified matrix sorted by issue topic.

Each table or matrix contains an action identification column. Actions are assigned an identification code based on the major topic area that it is related to (found in **Section 2**) and then a unique number assigned in no particular order. Each action in the tables is assigned to an issue topic described in **Section 2** and to a Working Group that is responsible for its implementation (see **Section 3.2** for further information on working group responsibilities). Whether the action is meant for only the unincorporated county or if it has a countywide potential, is also noted in the tables. As municipalities adopt the plan, they may wish to have their jurisdiction listed on particular actions to record their intent to implement those actions. Even actions listed as countywide may not be applicable for all jurisdictions to implement. It is up to each adopting jurisdiction to decide which actions they find appropriate for their community and to add their own unique actions to the plan. **Appendix C** includes a Municipal Participation Form on which the municipality can submit which actions they plan to address. The action tables also include the approximate timeframe for implementation and funding considerations, which may allude to possible funding sources listed in **Appendix D**. In addition, the post disaster action tables include a Disaster Level column that includes one or more of the following disaster scenario levels described in **Section 3.1**: minor, major, or catastrophic.

4.1 Short-term Recovery Actions

The short-term recovery stage of the PDRP includes those actions which must be started before long-term redevelopment can occur. There is a fine line between the beginning of short-term recovery actions and the end of emergency response actions that are contained in the CEMP. Some issues, such as debris management, may have a response component contained in the CEMP in addition to the actions listed here. Typically the timeframe in which to complete these short-term actions will be shorter than the timeframe for long-term actions found in **Section 4.2**.

Table 4.1 presents the short-term recovery actions that should be done in the “blue-skies” or pre-disaster period. **Table 4.2** contains the short-term recovery actions that will be needed after a minor, major, or catastrophic disaster event occurs in Palm Beach County.

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Table 4.1 Pre Disaster, Short-term Recovery Actions

Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Administration	LG-10	Debris Management and Disposal	Create municipal debris management plans: To maximize coordination and effective, rapid clean-up, municipalities should create their own plans OR the municipalities and county should expand the existing debris management plan to be inclusive of all jurisdictions and multiple agencies.	NA	XX Municipalities	Immediate.	In-house staff from Engineering and SWA coordinate with municipalities.
Administration	LG-11	Debris Management and Disposal	Secure Pre-event contracts from non-local waste collectors: The County already holds pre-approved contracts (PBC Debris Management Plan, 2005). Those should be assessed to determine that contractors have resources beyond the likely storm impact area, which would allow them to operate immediately. Local contracts could be supplemented with back-up contracts for non-local company in case locals are not operational.	NA	Unincorp. County and XX Municipalities	Immediate.	In-house staffing.
Administration	LG-12	Debris Management and Disposal	Determine pre-existing conditions at all Debris Collection sites: FL Dept. of Environmental Protection (FDEP) advises soil and groundwater testing be undertaken to establish pre-existing conditions to which the site must be restored prior to official closure.	NA	Unincorp. County and XX Municipalities	Immediate.	In-house staffing.
Building & Housing	LG-13	Debris Management and Disposal	Annual Reassessment of Debris Collection sites: GIS analysis will show the availability of parcels and any changes in adjacent land use which may have occurred since the site was selected. Follow-up with ground truthing.	NA	Unincorp. County and XX Municipalities	Conduct Annually.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Building & Housing	LG-14	Debris Management and Disposal	Identify Potential Debris Sites in Municipalities: Potential debris sites within municipalities are not included in the current PBC Debris management plan. In preparation for a catastrophic event, municipalities may wish to identify potential sites within their jurisdictions that can be used for debris. These debris sites could be operated by the municipality, or by the SWA pursuant to interlocal agreement, and would speed the clean up and recovery process.	NA	XX Municipalities	Immediate. Conduct annual reassessment.	In-house staffing.
Building & Housing	LG-16	Debris Management and Disposal	Promote Recycling of Surplus Materials from Reconstruction Activities: Salvaging construction materials from hurricane debris is not practical on a large scale. After a disaster, however, rushed, fragmented repair and rebuilding often results in extra construction materials being tossed in with construction debris while they could be easily salvaged. A substantial private-sector infrastructure exists within the County to recycle this type of waste and a process should be identified pre-disaster to make recycling as easy as tossing for contractors. When reconstruction activities begin, these recycling facilities should be advertised and the use of them highly encouraged.	NA	Unincorp. County and XX Municipalities	Immediate.	In-house staffing.
Building & Housing	LG-17	Debris Management and Disposal	Create Public Education campaign for the proper segregation of debris: Set the categories and explain the need to separate types of debris.	NA	Countywide	Immediate.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Building & Housing	LG-20	Critical Infrastructure & Facility Repair	Maintain current infrastructure designs and electronic back-up files: Staff should <i>continue</i> to analyze the structural integrity of the infrastructure systems (e.g., roads, culverts, bridges) to determine weaknesses and develop improved designs to increase mitigation. New construction designs could be kept on file, with electronic back-ups, for the at-risk system components. By maintaining electronic copies of designs, staff can act faster post-disaster and integrate mitigation into the repair process.	NA	Unincorp. County & XX Municipalities	Begin as soon as possible.	In-house staffing and/or hire consulting firm.
Building & Housing	LG-21	Critical Infrastructure & Facility Repair	Budget outlays for new designs and reconstruction: Considering the high cost and necessary function infrastructure systems provide, special budget outlays should be established as a contingency fund for post-disaster reconstruction or pre-disaster implementation of new, more advanced designs.	NA	Unincorp. County & XX Municipalities	Adjust every FY to ensure adequate funding.	In-house staffing + a source of funds for the budget outlays.
Building & Housing	LG-15	Critical Infrastructure & Facility Repair	Prearranged contracts with non-locals for repairs or supplies: Local companies should be used for public facility repairs if they have the capacity to do so after a disaster. However, to make sure that these repairs are made as soon as possible after a disaster, pre-arranged contracts with non-local companies should be made as a back-up.	NA	Unincorp. County & XX Municipalities	Begin as soon as possible.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Building & Housing	EP-27	Shortage of Contractors/Supplies Slows Repairing of Homes and Businesses	Stockpile temporary repair and/or construction materials needed for immediate repairs to public facilities: A small warehouse and stockpile of materials needed for cleanup and quick repairs to public facilities such as schools and government offices should be obtained so that a delay in supplies does not hinder resumption of public services. If excess supplies are available after public repairs have been made these can be opened for sale for private use.	All	Unincorp. County and XX Municipalities	Procure prior to next hurricane season and restock annually as needed.	Disaster Recovery Fund.
Building & Housing	EP-17	Rapid Restoration of Power & Private Utilities	Improve interconnections between utility providers: Isolated failures in utility infrastructure can place extreme burden on certain citizens. Improved interconnections will alleviate those isolated failures by providing service from adjacent systems. Improvements can include larger capacity lines that can provide full service quickly and valves controlled remotely that will function from afar without personnel.	NA	Countywide	Begin as soon as possible.	Seek state assistance through programs such as HMGP.
Building and Housing	EP-18	Rapid Restoration of Power & Private Utilities	Include multiple utility representatives on the Infrastructure Working Group: With FPL, Adelphia, multiple municipal water utilities, and PBC water and wastewater services, this issue is a complex network of players that must be coordinated to achieve a swift and efficient restoration of power and other utility services.	NA	Countywide	Immediate.	No cost.
Building and Housing, Land Use	LG-1	Availability of Temporary Housing/Long-term sheltering	Vacant Lands Inventory: Locate suitable parcels for the placement of temporary housing units (tents or trailers). Inter-departmental coordination needed to ensure vacant sites have adequate access to infrastructure and will be compatible with adjacent land uses. Utilize selection criteria in Temporary Housing Plan for Catastrophic Events (see Appendix D).	NA	Countywide	Conducted annually, prior to storm season.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Communication and Public Education	LG-2	Availability of Temporary Housing/ Long-term sheltering	Housing Stock Analysis: Identify those areas of County with most vulnerable housing stock - likely due to age, poor maintenance, or siting - and assure temporary housing lots are nearest these areas. Also, could require greatest amount of redevelopment attention.	NA	Countywide	Immediate.	In-house staffing and/or consultant.
Communication and Public Education	LG-3	Availability of Temporary Housing/ Long-term sheltering	Inform Damage Assessment Teams (DAT) of Temporary Housing and Long-term Shelter Sites: Inform DATs of temporary housing sites with a GIS layer of these sites included on their laptops. Habitability assessments needed in initial phase to determine if previously selected sites can be used.	NA	Unincorp. County and XX Municipalities	Conducted annually, immediately prior to storm season.	In-house staffing.
Communication and Public Education	LG-4	Availability of Temporary Housing/ Long-term sheltering	Pre-arranged agreements with hotels to house government employees and aid workers: Secure agreements with nearby hotels to house government employees and the influx of external aid workers deemed essential for sustaining government functions.	NA	Unincorp. County and XX Municipalities	Immediate.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Communication and Public Education	LG-5	Availability of Temporary Housing/ Long-term sheltering	Assistance in finding rental units for temporary housing: The Temporary Housing Plan suggests using vacant apartments and condo units to house displaced citizens (Temporary Housing Plan for Catastrophic Events, 2005). Due to the rapid turn over of rental units and the nature of private property, relying on vacant units will be a logistical problem, which could result in fewer available units than anticipated prior to the event. While utilizing available rental housing should be encouraged, finding these units will be up to individuals. The County could assist by setting up a website that allows land lords/rental agencies with undamaged available units to submit this information. Community Redevelopment Centers could have computers and telephones available for displaced persons to search for housing through this website. Staff could be available to assist.	NA	Countywide	Immediate.	In-house staffing and/or consultant to set up website.
Communication and Public Education	LG-6	Availability of Temporary Housing/ Long-term sheltering	Create an On-site Employee Housing Permit: Allow business owners to apply for a special permit to allow on-site employee housing in the event of a disaster. Staff will establish short term code compliance and ensure infrastructure hook ups are present in order to place housing on-site at major employment centers, utilizing parking lots, vacant industrial lands, or campus office centers.	NA	Unincorp. County and XX Municipalities	Prior to next hurricane season.	In-house staffing.
Communication and Public Education	LG-7	Availability of Temporary Housing/ Long-term sheltering	Designate Long Term Shelters: The county could designate secondary shelter sites in order to vacate the emergency, school-based shelters for repairs and swift restoration of educational services. Focus on community centers, church facilities, etc.	NA	Countywide	Immediate.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Communication and Public Education	LG-22	Fair & Equitable Distribution of Disaster Assistance	Procedures for securing donations and services from the private sector: In the aftermath of a disaster, there may not only be individual donations to groups such as the Red Cross, but private sector groups may wish to donate money or services for particular recovery functions. A procedure for accepting and properly using these donations should be in place. Also, some donations of services could be pre-arranged with the private sector in the event of a disaster.	NA	Countywide	On-going.	In-house staffing.
Communication and Public Education	LG-23	Fair & Equitable Distribution of Disaster Assistance	Prioritize Low Income Census Tracts for Recovery Resources: Utilize U.S. Treasury Department Investment Area Criteria to designate census tracts that should have first access to recovery grants and other financial assistance.	NA	Countywide	Prior to next hurricane season.	In-house staffing.
Economic Development	LG-40	Sustaining Essential Governmental Services	Create countywide clearinghouse for PDRP-related documentation: To ensure access, especially after a disaster, to needed documents by all working to implement PDRP actions, create a countywide clearinghouse of all materials relevant to implementation of the PDRP, as well as backup procedures. These materials include, but are not limited to, plans cited herein, all mutual aid agreements for post disaster assistance, and approved, pre-arranged contracts for post-disaster work. Documents should be available in hardcopy at the EOC library and in electronic format preferably accessible through a secure website.	NA	Countywide	Prior to next hurricane season.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Economic Development	LG-26	Sustaining Essential Governmental Services	Model Damage for Different Storm Scenarios: Using local GIS data, HAZUS and Solid Waste Authority modeling capabilities, produce countywide estimated damage scenarios based on the level of disaster. These can be used in both planning and training for post-disaster redevelopment.	NA	Countywide	Prior to next hurricane season.	In-house staffing and/or consultant.
Economic Development	LG-27	Sustaining Essential Governmental Services	Perform Mock-Disaster Finance Exercise: Using realistic damage estimates for a Category 4 or 5 hurricane, conduct an exercise that includes finance staff and decision makers in determining how to proceed with essential services with inevitable depletion of revenues.	NA	Unincorp. County and XX Municipalities	Prior to next hurricane season.	In-house staffing, possibly hire consultant to conduct.
Economic Development	LG-28	Sustaining Essential Governmental Services	Prioritize Essential Services: Creating a prioritized list of those services that citizens need immediately (i.e., law enforcement, public works, housing) can help speed the decision making process for post-disaster funding and reconstruction.	NA	Unincorp. County and XX Municipalities	Immediate.	In-house staffing.
Economic Development	LG-29	Sustaining Essential Governmental Services	Maintain Mutual Aid Agreements statewide: The agreements can help sustain services when many local staff and employees may find themselves victims of the disaster event. Establishing agreements statewide prepares the county for large disasters which will also adversely affect neighboring jurisdictions such as Broward and Martin Counties.	NA	Unincorp. County and XX Municipalities	On-going.	In-house staffing.
Economic Development	LG-30	Sustaining Essential Governmental Services	Maintain a list of possible funding sources for disaster recovery and redevelopment: Funding sources are included in this plan (Appendix D), however, new ones may arise and some may disappear. Current changes being made to FEMA and pilot programs being tested in Mississippi and Louisiana right now are examples of changes that could come to post-disaster funding opportunities. Annual updating of the funding list is essential.	NA	Countywide	On-going.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Economic Development	LG-31	Sustaining Essential Governmental Services	Establish protocols for County operational assistance to municipal jurisdictions: In the event that municipalities are overwhelmed and require operational assistance, agreements with the County should clearly state the parameters of authority and control for particular services provided.	NA	Unincorp. County and XX Municipalities	Immediate.	In-house staffing.
Environment	LG-32	Avoiding Erosion of Local Control	Establish a Disaster Recovery Fund: By creating recovery funding mechanisms (e.g., savings funds, stand-by line of credit) available for post-disaster recovery and redevelopment actions, local jurisdictions can exercise greater control over decision making and have the ability to set programs and actions in motion without having to wait for State or Federal assistance.	NA	Unincorp. County & XX Municipalities	Account for general contingency fund in annual FY. And, work with banking community for credit line.	Portion of budget set aside as savings.
Environment	LG-34	Municipal Insolvency following a disaster	Establish procedures for municipalities receiving financial assistance from the County: In the event that municipalities are overwhelmed by disaster and lose the financial foundation to remain stable in the short term, assistance agreements with the County should clearly state services provided, proper authority and control, and procedures for restoring stability to the municipality.	NA	Unincorp. County and XX Municipalities	Immediate.	In-house staffing.
Finance	LG-35	Municipal Insolvency following a disaster	Assist municipalities in developing Continuity of Operations Plans (COOPs) and coordinate with county COOPs: Not all municipalities currently have COOPs which could assist in planning for a situation which could lead to insolvency. Having coordination between the many municipalities' COOPs and the many county departments' COOPs could help establish procedures for dealing with possible municipality problems in providing services.	NA	Unincorp. County and XX Municipalities	As soon as possible.	In-house staffing and consulting services needed.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Finance	LG-36	Municipal Insolvency following a disaster	Information Sharing between Municipalities and County: When entering into assistance agreements, providing access to information regarding administration practices, contracts, and GIS files can facilitate a more efficient response on the part of the county staff. A GIS Countywide Clearinghouse could be created that provides back-up of this critical data and access by all involved in disaster recovery.	NA	Unincorp. County and XX Municipalities	Immediate.	In-house staffing.
Finance	LG-37	Use of Local Business Capabilities in Disaster Recovery	Create a Public-Private Partnership Network to supplement government recovery/redevelopment activities: Certain services can not be fulfilled by the government post-disaster. Establishing a partnership framework that utilizes the capabilities of private businesses to fill the particular voids can be beneficial to citizens.	NA	Countywide	Prior to next hurricane season.	In-house staffing.
Government Operations	LG-38	Use of Local Business Capabilities in Disaster Recovery	Include local businesses in pre-arranged contracts for recovery and redevelopment: While it would not be wise to rely entirely on local capabilities in a post-disaster situation, contract bids could be scored higher that have plans to sub-contract with local businesses if they are operational. The local governments could also arrange for services from local companies but have back-up agreements with outside companies (e.g., unaffected areas of FL, out-of-state) in the event that the locals are unable to operate.	NA	Unincorp. County and XX Municipalities	Prior to next hurricane season.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Government Operations	EP-2	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Locate possible sites for post-disaster temporary office space: On an annual basis prior to hurricane season, locate buildings/spaces that could be at least partially used for temporary space for businesses in need after a disaster, e.g., hotel meeting space or portions of community centers. Set up pre-arranged agreements for use of the spaces. Also, locate properties near business districts that mobile units could be placed on for temporary office space.	NA	Countywide	Prior to next hurricane season.	In-house staffing.
Government Operations	EP-22	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Make arrangements to secure mobile units/trailers for temporary office space: To provide more temporary office space than can be secured in undamaged buildings, mobile units should also be provided. Pre-arranged agreements to deliver these mobile units after a disaster should be made. The Small Business Administration (SBA) should be approached to see if they would create a program to provide these just as FEMA provides temporary housing trailers.	NA	Countywide	Prior to next hurricane season.	Grants/assistance from SBA or work to get a sponsoring company to help with costs; Disaster Recovery Fund.
Government Operations	EP-23	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Establish criteria for placing small businesses in temporary office sites: To ensure those businesses most in need of operating space are placed in the limited amount of temporary sites, scoring criteria and an application need to be created for use after the disaster. Example criteria: damage to office space prevents any safe use, financial need, ability of business to be productive during recovery period (i.e. no/limited loss of customer base due to disaster).	NA	Countywide	Prior to next hurricane season.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Government Operations	EP-3	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Locate possible sites for Business Recovery Centers: Using GIS, determine areas of high office concentration and search for facilities that could be used temporarily after a disaster for Business Recovery Centers (i.e., Workforce Alliance or chamber buildings). Secure pre-disaster agreements for a facility in each area and an alternate in case of damage or access problems.	NA	Countywide	Prior to next hurricane season.	In-house staffing.
Government Operations	EP-4	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Secure supplies for temporary offices and business recovery centers: Work with office supply and electronics companies to secure agreements for donations such as desks, chairs, computers, etc. to supply temporary office spaces and business recovery centers in the event of a disaster. Create a list and estimated amount of supplies that may be needed.	NA	Countywide	Prior to next hurricane season.	In-house staffing.
Government Operations	EP-5	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Coordinate with Workforce Alliance to co-locate services with Business Recovery Centers: Assisting employers in the search for employees can facilitate recovery. Co-locating the two entities can assist both parties. Coordinate with Workforce Alliance, which has offices in each region of the county.	NA	Countywide	Establish partnership prior to event, and keep operational with the Business Recovery Centers.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Government Operations	EP-24	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Encourage local physicians to create a coalition/network focusing on post-disaster recovery or enter into mutual aid agreements: Doctor offices are an important part of the small business community. Due to specialized equipment and office needs, offering temporary office space is not a very practical option. Instead forming a network or coalition may be helpful so that they can assist each other through sharing offices and equipment until repairs can be made. In addition, for doctors and nurses who cannot work out of their facilities, a network could assist in temporarily placing them with clinics and other doctor offices that need extra staff to deal with increased needs after a disaster.	NA	Countywide	Prior to next hurricane season.	In-house staffing.
Government Operations	EP-15	Shortage of Contractors/Supplies Slows Repairing of Homes and Businesses	Encourage Contractors and Citizens to maintain pre-arranged agreements for hurricane repairs: Finding a contractor after even a small storm is not easy and often results in damage going unrepaired for months or more. By making arrangements with qualified contractors before a storm for them to repair any damage, it allows for quicker repairs and for the contractor to already be aware of what supplies they may need so they can pre-stock to some degree.	NA	Countywide	On-going.	Include in next season's public education materials for hurricane preparation and costs will be minimal.
Health & Human Services	EP-26	Shortage of Contractors/Supplies Slows Repairing of Homes and Businesses	Provide staging areas for contractors and repair crews: Work crews of various trades consume open parking lots as their staging areas, preventing the entities using those sites from returning to normal operations. Defining regional locations that can be used as staging areas will coordinate recovery and redevelopment logistics.	NA	Countywide	Locate sites prior to hurricane season. Review annually.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Health & Human Services	EP-28	Agricultural Losses or Lake Okeechobee Dike breach	Continue utilization of community-based structure (e.g. CERTs) in the Glades area to facilitate hazard recovery/redevelopment and information dissemination: Given the current concerns over immigration, government officials may not be welcome in many areas of the County. The CERT structure should be established to address CEMP-related issues. (e.g., ESOL teachers could work within the community to identify individuals that could take a leadership role.) This structure should also be used to spread recovery and redevelopment information to the immigrant population.	NA	Unincorp. County and XX Municipalities	Prior to hurricane system.	In-house staffing. Volunteers within the schools.
Health & Human Services	SE-1	Reducing Incidence of Fraudulent & Unethical Practices	Create Public Education campaign to inform citizens of services offered by the county: Many incidents of fraud and deception occur when individuals are not aware of proper procedures or legal protections. The county could educate its citizens thoroughly about the services that will be provided and proper procedures to follow in an attempt to prevent such fraudulent acts.	NA	Countywide	Prior to next hurricane season.	In-house staffing; include in next season's hurricane education materials.
Infrastructure	SE-2	Reducing Incidence of Fraudulent & Unethical Practices	Provide Personal Finance Consultation Services at Community Redevelopment Centers: Secure pre-arranged agreements with firms to provide expert volunteers to counsel individuals and small business owners on their financial options after the disaster. Lack of knowledge or assistance often forces people into selling their property in a rush for much less than its worth or falling prey to predatory lenders.	NA	Countywide	Immediate.	None if firms donate staff time.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Infrastructure	SE-24	Reducing Incidence of Fraudulent & Unethical Practices	Educate the public on risks of using unlicensed contractors: Hurricane preparation education prior to storms should include information on why unlicensed contractors should not be used and how to check the credentials of a contractor. This information can also be made available at the Community Redevelopment Centers after a hurricane.	NA	Countywide	Immediate.	In-house staffing; include in next season's hurricane education materials.
Infrastructure	SE-5	Reducing Incidence of Fraudulent & Unethical Practices	Establish a countywide liaison with the State Attorney General fraud task force: This individual will act as Palm Beach County's liaison with the State Attorney General and Department of Consumer Affairs. Work should focus on pre-disaster education campaigns and informing the public of scams regarding home repairs, charity/donations, price gouging, ID theft, and insurance payments, among others. Also, the liaison could work with the media to keep citizens informed of recent fraudulent trends.	All	Countywide	Immediately seek to create the group. Can go into investigative action soon after recovery begins.	In-house staffing and possibly temporary employees.
Infrastructure	SE-3	Individual's Role in Preparing for & Recovering from a Disaster	Create an education campaign for increased self reliance after a disaster: Encourage residents and businesses to start disaster savings (future possibility of Congress making tax-free disaster savings accounts) for their insurance deductibles, temporary housing needs, and other costs. Also stress need to acquire property or rental insurance that covers appropriate hurricane damages. These longer-term preparedness issues can be included with education on family evacuation plans, longer food and water supplies, and keeping personal medical/prescription records.	NA	Countywide	Immediate.	Partner with media outlets and financial service firms.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Infrastructure	SE-25	Adequate Health and Mental Health Services Available During Recovery	Assess capabilities of hospital system and medical transport services to cope with non-operational hospitals: Due to the vulnerable location of some hospitals in Palm Beach County there is the possibility of in a major disaster certain hospitals may not be operational not just during immediate response but for a longer-term. The ability of the other hospitals to deal with increased demand in this case should be assessed including their financial capabilities to deal with increased uninsured patients. Also the need for mutual aid agreements to borrow helicopters or other transport services to deal with increased distances to operational emergency rooms should be assessed. A mock-disaster training session including detailed risk assessments for the hospital system could be a useful tool.	NA	Countywide	Begin assessment prior to next hurricane season.	In-house staffing.
Infrastructure	SE-16	Water Pollution from Sewer System Failures	Create Surface water clean up procedures: Surface waters, including streams, canals, rivers, lakes, and the ocean, can all be contaminated by sewer system failures. Contingency plans for quick clean up should be in place to prevent or slow widespread contamination. It is a two-part clean up, including solids and bacterial particles.	NA	Unincorp. County and XX Municipalities	As soon as possible.	Staff time in coordination with the SFWMD and USACE.
Infrastructure	SE-17	Increased Fuel for Wildfires on Conservation Lands	Identify properties with potential for wildfire risk if there is a hurricane: Using conservation lands and Property Appraiser GIS shape files create a list of property owners and contact information within 1,000 ft. of wooded, conservation tracts. The list will be used to raise awareness about increased risk of wildfire due to hurricane debris during the recovery period after a hurricane.	NA	Countywide	List should be prepared annually prior to hurricane season.	Minimal staff time will be required to use GIS to prepare the list.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Infrastructure	SE-22	Unhealthy Levels of Mold in Damaged Structures	Educate the public of the health risks of mold: Include educational information in hurricane preparation materials and through the media about identifying mold problems, avoiding structures with large concentrations of mold, and hiring mold remediators. Special-needs individuals who are more susceptible (i.e. home oxygen users) should receive high priority in education efforts. Creative methods for reaching these groups should be developed (such as vendors of oxygen equipment).	NA	Countywide	As soon as possible.	In-house staffing; can be added to existing hurricane education materials.
Infrastructure	RM-8	Ensuring Strong Code Enforcement	Revise "Post-Disaster Temporary Permit Suspension" (Building Moratorium) ordinance (Article XII, Sec. 7): Create a rolling moratorium, based on DAT reports, that utilizes the existing triaged damage assessment approach. Those areas which experience the most severe damage will have the suspension lifted later. This allows less affected areas to begin the rebuilding process. Also, place activation/deactivation authority in the hands of the Building Division Director, who will better recognize the personnel workload and backlog.	NA	Unincorp. County	Immediate. One-time Action.	In-house staffing.
Infrastructure	RM-25	Communicating with & Involving the public in Recovery and Redev. Issues	Encourage faith and community organizations to collect evacuation contact information: These groups could ask their members to provide email addresses and phone numbers (i.e., cell numbers or out of state family) they could be reached through in the event of long-term evacuation. The groups could then assist in getting messages about repopulation and rebuilding out during the recovery period.	NA	Countywide	Immediate.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Land Use	RM-17	Including Mitigation in Rebuilding	Partner with home improvement stores and major home builders to advocate structural hazard mitigation: By spreading information about mitigation techniques in the places where homeowners are turning to start repairs they could be persuaded to include mitigation while they are making repairs. Stores and contractors can be armed ahead of time with educational materials to offer customers during redevelopment after a disaster.	NA	Countywide	Immediate.	In-house staffing and educational materials. Solicit partner companies to pay the cost of printing.

* See Section 3 for a list of Working Group Chairpersons or Appendix D for a suggested list of Working Group contributing members

** See Appendix D for funding source information.

LG= Local Government Recovery Issues (Section 2.1), EP= Economic and Private Sector Issues (Section 2.2), SE= Social and Environmental Issues (Section 2.3), RM= Redevelopment and Mitigation Issues (Section 2.4)

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Table 4.2 Post Disaster, Short-term Recovery Actions

Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Administration	LG-8	Availability of Temporary Housing/ Long-term sheltering	Analysis of Damage Assessment Findings: Determine most severely impacted areas and determine which pre-identified vacant parcels might best serve the residents of the immediate area for temporary housing.	Major & Catastrophic	Unincorp. County and XX Municipalities	Upon completion of initial damage assessment.	In-house staffing.
Administration	LG-19	Debris Management & Disposal	Coordinate burning with FL Division of Forestry (FDOF): FDOF must be notified of any debris collection sites where burning will occur. Appropriate mitigation efforts will be employed to avoid fires spreading beyond the collection site.	All	Countywide	Remain in contact for duration of debris processing.	In-house staffing.
Building & Housing	LG-24	Fair & Equitable Distribution of Disaster Assistance	Establish Community Redevelopment Centers: Locate centers throughout all sectors of County, focusing specifically on low-income and most affected areas. Sites will provide guidance on state/federal applications, disburse long-term rental assistance, and provide redevelopment information. Could co-locate with regional one-stop permitting sites in some areas. See Appendix D for greater details.	All	Countywide	Remain open until Temporary Housing needs are processed and redevelopment visioning has been completed.	In-house staffing, plus volunteers and temporary employees needed to staff centers.
Building & Housing	LG-25	Fair & Equitable Distribution of Disaster Assistance	Provide multi-lingual assistance to communities throughout the county: Numerous communities in Palm Beach County have high percentages of non-English speakers, namely of Spanish and Haitian Creole. Staff handling public participation in redevelopment efforts should be multi-lingual or interpreters could be provided.	All	Countywide	Whenever disaster assistance is provided in these communities.	Volunteers or outside assistance.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Building & Housing	LG-33	Avoiding Erosion of Local Control	Maintain and Implement the PDRP: The PDRP provides direction in the post-disaster period and can exhibit that local authorities have priorities. During implementation, the County can invite State and Federal officials to sit in on committee or working groups' meetings.	All	Countywide	On-going.	In-house staffing.
Building and Housing	LG-39	Use of Local Business Capabilities in Disaster Recovery	Organize a post-disaster potential subcontractors meeting: Through the Public- Private Network, arrange and advertise for a meeting of local business who are ready to offer services in recovery projects and representatives from the companies who hold recovery contracts and are looking for subcontractors.	All	Countywide	Within 2-3 weeks after disaster.	In-house staffing.
Communication & Public Education	EP-6	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Establish Business Recovery Centers: This is the business equivalent of the Community Redevelopment Centers. These centers should be located in hard-hit business districts throughout the county and offer services such as assistance with applying for disaster assistance/loans, applications for bridge loans, and information about government-supplied temporary office space and where to look for space to rent. The centers should also offer basic office and communications equipment that can be used for short amounts of time, such as phone, fax, copy machine, and computers with internet access. A message board area could also be available at the center so that businesses can post items they have available to assist others or they can post things they are in need of.	Major & Catastrophic	Countywide	Establish as soon as possible after the disaster and remain open until communications are fully operational and offices in area are under repair or businesses have found temporary relocations.	In-house staffing or volunteers could be used. Some items could be donated. Any other costs could come from the Disaster Recovery Fund or outside assistance.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Communication and Public Education	EP-7	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Establish Temporary Office Sites: Starting with the pre-arranged sites and adding other undamaged vacant warehouse and office/retail building sites available after the storm if needed. Businesses must apply at a Business Recovery Center for use of a temp. office. Priority given to small and minority businesses with greatest financial need. Placement should be as close to original business location as possible. Child care facilities should be co-located, at least with the larger sites.	Major & Catastrophic	Countywide	Establish as soon as possible after the disaster and remain open until the housed businesses have received financial assistance or have finished repairs to their offices.	In-house staffing to make arrangements. Some sites may not be donated and will require money for leasing. The Disaster Recovery Fund and/or outside assistance could be used.
Economic Development	EP-8	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Provide wireless internet access hubs throughout the community: A major problem for businesses after a disaster is lack of communications. Providing wireless hubs free of charge in public areas near business districts and office parks would allow many who have laptops and PDAs, or are close to the hub to have some access, to at least partially return to business. Pre-arranged agreements with wireless internet providers to allow temporary free access to their services for impacted businesses might be an option. Also, preparation for such a service should be done in coordination with the commission currently working on establishing countywide wireless infrastructure.	Major & Catastrophic	Countywide	Establish as soon as possible after the disaster and remain free/available until communications are fully operational.	Donations from private sector or Disaster Recovery Fund.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Economic Development	EP-29	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Provide short-term children's activities until regular school and child-care facilities are available: Cities and community organizations who have children's activities such as summer camp or sports programs should provide special sessions of these after a disaster to give parents a safe option for their children during the day until schools reopen or after school so they can return to work. The County School Board is also working on providing these services in undamaged schools.	Major & Catastrophic	Countywide	Establish as soon as possible after the disaster and remain available until typical child care facilities and after-school activities have resumed.	Private donations, volunteers, and/or Disaster Recovery Fund.
Economic Development	EP-16	Shortage of Contractors/Supplies Slows Repairing of Homes and Businesses	Develop incentives for large construction firms to take part in the repair and reconstruction process: A "repair to permit" ratio could be developed to allow a firm to make disaster-related repairs on a certain number of private structures in exchange for receiving fast-tracked permit processing on a certain number of new structures once the temporary permit suspension ceases. The ratio should be set at such a scale that a significant number of repairs are completed. However, if the ratio is too large (approaching 1:1) then the repair/reconstruction needs for which the program was initiated will quickly be abandoned in favor of returning to new construction in-progress prior to the disaster event..	All	Unincorp. County and XX Municipalities	Announce intention and provide criteria prior to storm.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Environment	EP-20	Agricultural Losses or Lake Okeechobee Dike breach	Provide bridge loans and/or property tax deferments to small farmers: The small farmer is endangered in Florida and, after severe damages, may see no choice financially than to sell the land for development. By offering quick financial assistance through bridge loans until the US Department of Agriculture can assist, and by allowing for deferments or waiving a certain amount of property tax, the County could encourage these lands to remain working farms.	All	Unincorp. County	As soon as possible after disaster.	Agreements with banks and backing for the loans. Further cut in tax revenues but not an immediate loss.
Environment	EP-21	Agricultural Losses or Lake Okeechobee Dike breach	Coordinate with Red Cross, faith-based groups, and other NGOs for assistance in the Glades communities: Due to the higher percentage of immigrant agricultural workers in the area and the current concern surrounding immigration, non-governmental assistance may be better received than from government officials.	All	Countywide	As soon as possible after disaster.	Volunteers.
Environment	SE-6	Adequate Health and Mental Health Services Available During Recovery	Coordinate with the American Psychological Association's (APA) Disaster Outreach Program and SAMHSA Projects Hope & Recovery: Mental health needs after a major disaster will likely be more than a damaged local health care system can attend to. Working with volunteer groups such as APA and Red Cross to distribute mental health assistance throughout the community in coordination with other disaster assistance will better serve the County's residents.	Major & Catastrophic	Countywide	As soon as possible after disaster.	Volunteers.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Environment	SE-28	Adequate Health and Mental Health Services Available During Recovery	Provide a mobile health unit: Focusing on hard-hit and low-income neighborhoods, provide counseling and health screening and referral services through a mobile unit that rotates its location throughout the community until clinics and other medical services are reopened.	Major & Catastrophic	Countywide	As soon as possible after disaster.	Volunteers to staff. Mobile unit could be arranged through large non-profit such as Red Cross or grants from health foundations.
Finance	SE-13	Coastal and Aquatic Restoration	Assess damage to coastal wetland/mangrove habitats: Access and document damages to these areas. Inform property owners of need to restore coastal wetland vegetation for hazard mitigation as there may be some property owners who will try to develop damaged areas. Apply for grants to restore these areas.	All	Countywide	After immediate response activities have been completed.	In-house staffing or consulting costs + aerial photography which may be used for other post-disaster actions.
Finance	SE-19	Increased Fuel for Wildfires on Conservation Lands	Conservation Areas Damage Assessment: Assess amount of hurricane debris in conservation areas and the associated wildfire risk.	All	Unincorp. County and XX Municipalities	After immediate response activities and built environment damage assessments have been completed.	In-house staffing, possibly aerial assessments or photography.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Health & Human Services	SE-20	Increased Fuel for Wildfires on Conservation Lands	<p>Accelerated Fuel Reduction Strategy: Through coordination with FDOF and land managers, develop a prioritized fuel reduction schedule for impacted conservation areas. Mechanical removal and prescribed burns should be employed to decrease risk of wildfire with more populated areas receiving first priority. Temporary fuel breaks can be considered for areas that can not receive attention prior to the beginning of fire season.</p>	Major or Catastrophic; possibly needed if multiple Minor events in a season	Unincorp. County and XX Municipalities	After conservation areas damage assessment ; implementation of strategy ideally before start of fire season in Feb.	Federal emergency funds often available through USDA Forest Service and State funds through FDOF. Ideally, managing entities of conservation areas could budget for such activities avoid waiting for grant funding. Mutual aid might be possible to increase number of certified burning and other needed professionals and equipment.
Health & Human Services	SE-21	Increased Fuel for Wildfires on Conservation Lands	<p>Post-Hurricane Wildfire Education Initiative: Using the list of potential at-risk property owners, mail FDOF brochure of hurricane debris wildfire risk. In coordination with FDOF, present to homeowner groups what they can do to reduce their vulnerability during the increased risk period while hurricane debris is still in conservation areas near them.</p>	Major or Catastrophic; possibly needed if multiple Minor events in a season	Unincorp. County and XX Municipalities	After conservation areas damage assessment and before start of fire season in Feb.	In-house staffing, mailing costs.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Health & Human Services	SE-23	Unhealthy Levels of Mold in Damaged Structures	Provide information and oversight of mold infestation: Through the Community Redevelopment Centers and the media educate the public of the health risks of mold. Provide a hotline that can be called for renters and employees who feel their concerns over mold in their home or workplace is not being adequately addressed. Health officials can provide courtesy checks of these structures and follow-up to see that remediation of the problem is conducted.	Major & Catastrophic	Countywide	As soon as possible after disaster.	In-house staffing, volunteer time.
Health & Human Services	RM-9	Ensuring Strong Code Enforcement	Activate Mutual Assistance Agreement: Utilize network and agreements set up within Building Officials Association of Florida (BOAF). Personnel from outside the County will be used for habitability assessments and customer relations, beyond the usual working routines of County inspectors.	Major & Catastrophic	Unincorp. County and XX Municipalities	Immediately following analysis of DAT findings.	In-house staffing.
Health & Human Services	RM-26	Communicating with & Involving the public in Recovery and Redev. Issues	Secure access to County Channel 20, School Board channel 19 (TEN), and other media outlets to disseminate information: Electronic media outlets should be a top-tier repair priority. Once restored, these outlets can forego usual programming to provide public information messages regarding recovery and redevelopment.	All	Unincorp. County	After completion of damage and habitability assessments.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Health & Human Services	RM-18	Including Mitigation in Rebuilding	Expand One-Stop Permitting Centers to include mitigation information: At the existing county building division regional offices which serve as rapid permitting centers after a disaster, also include technical information and expert advice about including mitigation techniques during repairs and rebuilding. Information about financial assistance available for including mitigation and how to find a contractor who can use new mitigation techniques may make it easier for some to include mitigation. Simply being asked prior to permits being processed if they have considered any of the mitigation solutions and pointing them to information on them could be a major influence and help to build a more disaster resistant community.	All	Unincorp. County & XX Municipalities	Include mitigation information as soon as center opens.	Partnering with non-profits that specialize in hazard mitigation could make this a no or low cost action.
Infrastructure	RM-22	Including Affordable Housing in Redevelopment Projects	Expedite grant and loan funding processes: Provide quick financial assistance - through SHIP, HOME, etc. - to those homeowners lacking home insurance & unable to rehabilitate structures in timely manner. Distribute through Community Redevelopment Centers.	All	Unincorp. County and XX Municipalities	As soon as possible.	In-house staffing and utilization of mutual aid agreements for additional staff.

* See Section 3 for a list of Working Group Chairpersons or Appendix D for a suggested list of Working Group contributing members

** See Appendix D for funding source information.

LG= Local Government Recovery Issues (Section 2.1), EP= Economic and Private Sector Issues (Section 2.2), SE= Social and Environmental Issues (Section 2.3), RM= Redevelopment and Mitigation Issues (Section 2.4)

4.2 Long-term Recovery and Redevelopment Actions

The long-term post disaster recovery and redevelopment period begins once a majority of the immediate recovery and short-term obstacles are removed from daily priorities. Some of the most important and difficult actions for shaping the future of Palm Beach County are found in this section. In the wake of a major or catastrophic disaster, a window of opportunity presents itself for changing current development trends and possibly correcting past mistakes. As referred to in **Section 2.4**, post disaster redevelopment could direct Palm Beach County to its ideal vision of sustainability and disaster-resilience. **Appendix D** contains ideas for redevelopment opportunities that could be used during a visioning charette as residents decide how to reconstruct their communities.

Table 4.3 presents the long-term recovery and redevelopment actions that must be undertaken in the “blue-skies” or pre-disaster period to prepare Palm Beach County for a post disaster period. **Table 4.4** contains the long-term actions that will be needed after a minor, major, or catastrophic disaster event occurs.

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Table 4.3 Pre Disaster, Long-term Recovery and Redevelopment Actions

Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Administration	LG-18	Debris Management and Disposal	<p>Establish housing demolition protocols: Protocols for demolition of destroyed homes for absent property owners should be established so that these unsafe, blighted structures do not remain for too long. Lobbying efforts should focus on making the process of financial reimbursement from FEMA for demolition easier for local governments. Also, the demolition process should include detailed documentation, i.e. photos, of the structures prior to demolition for insurance purposes of the owners if they are not able to return prior to demolition. Once procedures are developed, send information out with property tax statements to inform owners of the demolition protocols and the timeframe involved for them to return or contact the local government about the destroyed structure after a disaster. The property owners should be solicited to provide voluntary contact information such as cell phone number or email address where they could be reached after a disaster in the case of their structure being on the demolition list. This could be added to the current property appraiser database.</p>	NA	Countywide	Immediate.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Building & Housing	EP-1	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Assist small business with continuity planning and mutual aid agreements: Through the Private-Public Network and other business organizations as well as at the time of applying for an occupational license, make available templates and other information about how to create a business continuity plan for small businesses. Also, introduce the idea in the business community of mutual aid agreements between businesses. Provide continuity training sessions and presentations at chamber meetings or as special workshops in addition to website and print materials.	NA	Countywide	Immediate.	In-house staffing. Grants for temporary positions to educate business community.
Building & Housing	SE-4	Reducing Incidence of Fraudulent & Unethical Practices	Preventing Predatory Real Estate investment and 'house flipping': Investigate creative options to decrease the financial burden on low-income homeowners attempting to reestablish themselves in the county. Could take the form of reducing or waiving property taxes, or working with local banks and lending institutions to deter, reduce, or waive mortgages for a certain amount of time after a disaster impacts the county.	NA	Countywide	Immediate.	In-house staffing and coordination with local lending/banking institutions.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Building & Housing	SE-26	Adequate Health and Mental Health Services Available During Recovery	Lobby the State to establish an online database of medical records and recent prescriptions: A dispersed population, new medical personnel, and fragmented filing are encumbrances to efficient post-disaster medical care. An integrated electronic database of records, prescriptions, allergies, etc. will allow physicians to access records from afar or for patients with whom they have no prior experience. Louisiana and other states have done this after the problems they encountered with Katrina. There are many privacy issues that would need to be addressed, however.	NA	Countywide	Coordinate with AMA and local medical community and suggest prior to next hurricane season.	In-house staffing.
Building & Housing	SE-27	Adequate Health and Mental Health Services Available During Recovery	Encourage Employee Assistance Programs to address post-disaster mental health: Employers (including local governments) can provide free and confidential counseling through an employee assistance program to assist with post-disaster stress. Also employees can be educated to be sensitive of signs of possible post-disaster stress in their co-workers.	NA	Countywide	Immediate.	In-house staffing and outreach through private-public partnership and other business organizations.
Building & Housing	SE-9	Coastal and Aquatic Restoration	Ensure FDEP files/permits are up to date: FDEP must have approved beach/dune design templates on file to expedite post-disaster nourishment project approval. Inspections are also necessary for upland sand sources.	NA	Countywide	Annual.	In-house staffing.
Communication & Public Education	SE-10	Coastal and Aquatic Restoration	Revise beach/dune templates as necessary: FDEP approves the design templates for approx. 5 years, but this period can be shortened when severe erosion is experienced.	NA	Countywide	3-5 year cycles depending on erosion rates.	In-house staffing.

Palm Beach County Post Disaster Redevelopment Plan

Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Economic Development	SE-18	Increased Fuel for Wildfires on Conservation Lands	Promote Management Plans for Conservation Areas with emphasis on dealing with hurricane debris: Amend County Parks management plans to include strategies for dealing with increased wildfire fuel from hurricane debris. Require through comprehensive plan policy that conservation easements include language for fuel maintenance, particularly after a hurricane. Coordinate with state-owned conservation areas to ensure management plans address hurricane debris.	NA	Unincorp. County and XX Municipalities	Adoption or amendment of management plans and inclusion of comp plan policies should occur ASAP. This is not a recurring action.	In-house staffing.
Environment	RM-1	Ability to Rebuild Stronger Structures	Amend Homeowner & Neighborhood Association covenants: Restrictive covenants often preclude the introduction of valuable hazard mitigation measures. The covenants can be amended to improve disaster resiliency. This can be done voluntarily through public education or, in newly proposed areas, require all new covenants to address mitigation.	NA	Unincorp. County and XX Municipalities	Immediate. Begin education and attempts to amend.	In-house staffing; education outreach costs.
Environment	RM-2	Ability to Rebuild Stronger Structures	Bring Structures into Compliance with current building codes: Structures that exceed the 50% threshold for substantial damage shall be required to come into compliance with the current regulations of the Florida building code. Lowering the threshold for substantial damage to 45% or 40% could increase future resiliency and improve insurance rate premiums.	NA	Unincorp. County and XX Municipalities	Immediate.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Environment	RM-3	Ability to Rebuild Stronger Structures	Increase skilled construction workforce: In order to meet the demand for reconstruction, coordinate with local community college or vocational schools to offer construction and trades classes. Include accreditation courses on the FL Building Code, which could be conducted by the Building Code Education & Outreach Council.	Major & Catastrophic	Unincorp. County and XX Municipalities	Create framework for quick post-disaster implementation.	Seek state assistance.
Environment	RM-4	Ability to Rebuild Stronger Structures	Increase Wind Load Velocity regulations: Pursue legislation to introduce more stringent wind load velocity (156 mph) regulations for Palm Beach County in the Florida Building Code.	NA	Countywide	Immediate.	In-house staffing, lobbying costs.
Finance	RM-5	Ability to Rebuild Stronger Structures	Expand V-Zone regulations to A-Zones: Stringent flood prevention regulations directed toward V-Zones should be expanded to structures found in A-Zones. Structures could come into compliance voluntarily or once hazard related damages exceed the 50% threshold. A-Zones often experience similar flood, surge, and wind hazards but do not currently meet most protective development standards.	NA	Unincorp. County and XX Municipalities	Immediate.	In-house staffing.
Health & Human Services	RM-6	Ability to Rebuild Stronger Structures	Public education to promote hardening and mitigation: Conduct workshops or public education campaigns to encourage citizens to build structures that exceed the Florida Building Code and include hardening and mitigation advances.	NA	Unincorp. County and XX Municipalities	Immediate.	Add to LMS for funding opportunities.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Health & Human Services	RM-11	Limiting Redevelopment in Hazardous Areas	Create non-conforming structure inventory: Non-conforming structures -- those built prior to adoption of Comp. Plan/ULDC regulations of area, height, lot coverage, yard setbacks, lot location, parking, or other dimensional requirements -- are not allowed to be rebuilt to the previous standards upon reaching the 50% damage threshold. Maintaining an inventory will speed the decision making process for redevelopment orders and permitting.	NA	Unincorp. County and XX Municipalities	Immediate.	In-house staffing or consultant costs.
Infrastructure, Governmental Operations	RM-12	Limiting Redevelopment in Hazardous Areas	Petition FDCA for expedited Comprehensive Plan amendment review/approval: In order to redevelop quickly and in a smarter fashion, the Comprehensive Plan may require amendments. The county could lobby FDCA to establish a temporary county office during redevelopment to attend planning meetings and charettes and rapidly process amendments.	NA	Unincorp. County and XX Municipalities	Immediate.	None.
Land Use	RM-13	Limiting Redevelopment in Hazardous Areas	Renew funding for Conservation Land Acquisition Selection Committee (CLASC) purchases: The CLASC could play a role in post-disaster land acquisition if properly funded. Also, selection criteria should be expanded to include mitigation against natural hazards. Acquisition could allow the County to assemble parcels for inclusion in the open space program and it will enable the County to avoid the same amount of destruction in future storm events.	NA	Unincorp. County and XX Municipalities	Immediate.	In-house staffing, bond referendum or other funding source.

Palm Beach County Post Disaster Redevelopment Plan

Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Land Use	RM-20	Including Affordable Housing in Redevelopment Projects	'No Net Loss' Resolution adopted: Jurisdictions can pass a resolution to show support for all citizens to return after a major or catastrophic disaster and the intent to provide housing for a mixture of income levels. Any measure more stringent may encounter property rights issues.	NA	Unincorp. County and XX Municipalities	Immediate. One-time action.	None.
Land Use	RM-21	Including Affordable Housing in Redevelopment Projects	Address Post Disaster Redevelopment in the County Workforce Housing Program regulations: Include provisions in the County workforce housing program addressing redevelopment. The program could require workforce housing be included in those apartment/condo buildings and/or developments which experience damages in excess of 50% of the total value. Also, all new post-disaster construction must be in compliance with the existing workforce housing program.	NA	Unincorp. County	Immediate.	None.

* See Section 3 for a list of Working Group Chairpersons or Appendix D for a suggested list of Working Group contributing members

** See Appendix D for funding source information.

LG= Local Government Recovery Issues (Section 2.1), EP= Economic and Private Sector Issues (Section 2.2), SE= Social and Environmental Issues (Section 2.3), RM= Redevelopment and Mitigation Issues (Section 2.4)

Palm Beach County Post Disaster Redevelopment Plan

Table 4.4 Post Disaster, Long-term Recovery and Redevelopment Actions

Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Building & Housing	LG-9	Availability of Temporary Housing/ Long-term sheltering	Subsidize long-term temporary housing: Staff could identify and disburse emergency rental housing assistance funds through the Community Redevelopment Centers for citizens awaiting the restoration of permanent residences. (Predicted as a preferred FEMA approach in future.)	Major & Catastrophic	Unincorp. County and XX Municipalities	Disbursal will begin with cessation of gov't provided sheltering. End point dependent on funds.	Financial assistance: FEMA, State, Disaster Recovery Fund Processing: In-house staffing.
Building & Housing, Finance	EP-9	Avoiding Permanent Relocations of Core Businesses Outside of the Community	Create Business Improvement Districts (BID) in downtown and retail centers: BIDs can provide a way for businesses to pool resources to encourage people to return to these areas to shop, eat, etc. With cuts to local government resources, repairing the appearance of these areas to attract customers may be a low priority.	All	Countywide	Soon after the disaster.	In-house staffing to assist in creating BIDs.
Communication and Public Education	EP-10	Avoiding Permanent Relocations of Core Businesses Outside of the Community	Advertise the quick recovery and resumption of business to the nation: Once it is safe for people to return and businesses reopen, especially retail/restaurants, make sure the nation is aware of the recovery to avoid stagnation of the local economy and invite returning seasonal residents. If a major disaster strikes, the news coverage of the devastation will remain in many peoples' minds and slow investment in the area unless counteracted with positive images of recovery.	Major & Catastrophic	Countywide	Depending on the level of disaster but after enough time has elapsed for businesses to have reopened.	In-house staffing to produce press releases and work with reporters. Possibly produce and run commercials with State assistance.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Economic Development	EP-11	Avoiding Permanent Relocations of Core Businesses Outside of the Community	Produce statistics for post-disaster economic environment for better marketing business opportunities and discovering needs: The demographics and economic environment is likely to have dramatic changes after a disaster. For businesses to access the market and the workforce capabilities they will need new population and economic statistics. The County can assist by having a post-disaster report done and distributing to the business community.	Major & Catastrophic	Countywide	Depending on the level of disaster but after enough time has elapsed for some of the population to have returned.	Would most likely be done through a consultant. Grants or state money may be available but may not want to wait for these.
Economic Development	EP-12	Avoiding Permanent Relocations of Core Businesses Outside of the Community	Hold an Economic Development Charette for the business community after a disaster: Due to unforeseen changes from a disaster, the current economic development plans may need updating to reflect changed conditions. To do this, a charette could be held to solicit creative solutions to rebuilding the economy - industry, tourism, medical, retail, and research and development.	Major & Catastrophic	Countywide	Depending on the level of disaster but after enough time has elapsed for some of the population to have returned.	In-house staffing and facilitation services.
Economic Development	EP-13	Avoiding Permanent Relocations of Core Businesses Outside of the Community	Beautification/landscaping for tourism: Landscaping and other physical attributes, which add to a sense of place and attract tourist and seasonal residents, needs to be replaced. While not an immediate need, these little touches should not be forgotten if the County also is working on repopulation.	All	Countywide	Within a year after the disaster.	Local volunteer groups and grants such as Urban Forestry Grant.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Economic Development	EP-14	Avoiding Permanent Relocations of Core Businesses Outside of the Community	Adjusting Incentive Packages: Businesses that received incentive packages as a means to lure economic development to the county could be granted a waiver on measurable objectives they must achieve before collecting the full package. Previously decided upon criteria could become a disincentive for the business to remain and redevelop. The waiver could provide more time to achieve the objectives or reduce the objective while maintaining the same timeframe.	Major & Catastrophic	Countywide	Analyze need for such a program within a few months after the disaster.	In-house staffing.
Economic Development	EP-25	Avoiding Permanent Relocations of Core Businesses Outside of the Community	Develop special post-disaster incentive packages to entice business to remain in Palm Beach County: The County can utilize current programs or develop new programs to provide incentive packages to businesses to redevelop and restore operations, rather than relocate to unaffected areas.	Major & Catastrophic	Countywide	Analyze need for such a program within a few months after the disaster.	In-house staffing.
Economic Development	EP-19	Rapid Restoration of Power & Private Utilities	Build in Mitigation during reconstruction of utilities: Underground utilities have a high up-front cost but will ultimately lower expenditures and assist in a more rapid restoration of power after disasters. Other mitigation efforts can focus on hardened, stronger designs for the infrastructure, such as stormwater, water, and wastewater facilities and systems.	All	Countywide	Implement after DAT findings are analyzed.	Private utilities assume costs but could be assisted or loaned funds through the Disaster Recovery Fund.
Economic Development	SE-7	Restoring Educational, Cultural, and Historic Amenities	Assisting Educational and Cultural Facilities find funding for repairs and restoration: After the disaster, local governments should designate staff to assist in finding grants and other assistance for these facilities.	All	Unincorp. County and XX Municipalities	After immediate response activities have been completed.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Economic Development	SE-8	Restoring Educational, Cultural, and Historic Amenities	Tax breaks for Historic Structure Restoration: Providing property tax breaks for proper restoration of historic structures damaged by the disaster.	All	Unincorp. County and XX Municipalities	Prior to property taxes coming due.	Will be a slight decrease in revenues.
Environment	SE-11	Coastal and Aquatic Restoration	Coordinate with FDEP & USACE to conduct erosion assessment: This is the first step in securing approval and funding to undertake nourishment projects.	All	Countywide	Immediately following the storm event.	In-house staffing.
Environment	SE-12	Coastal and Aquatic Restoration	Reassess CCCL: In a catastrophic, 100-year storm event, the erosion will be so great to warrant reassessing and possibly moving the demarcation landward.	Catastrophic	Countywide	Begin following the FDEP erosion assessment	In-house staffing and surveying costs.
Environment	SE-14	Coastal and Aquatic Restoration	Assess and restore damaged coral reefs: Using volunteers from local scuba dive organizations survey possible damage to local coral reefs. Where severe damage has been found secure grants to restore reefs as these are a major tourism draw and are already highly threatened.	All	Countywide	After immediate response activities have been completed.	Volunteers for initial survey and contract for restoration work. Grants through national organizations may be available.
Environment	SE-15	Coastal and Aquatic Restoration	Marine debris clean up: Hurricane debris finds its way into the intracoastal waterway, ocean, and connected waterbodies. Clearing large or toxic debris is necessary for public safety as well as environmental protection. Coordination with the Coast Guard, USACE, and Lagoon Keepers is recommended.	All	Countywide	After immediate response activities have been completed.	Grants are available through NOAA and other organizations.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Environment	RM-7	Ability to Rebuild Stronger Structures	Conduct Building Code effectiveness analysis: County should <i>continue</i> to conduct analysis of the adopted building code in search of areas that can be improved as a means to increase public safety.	Major & Catastrophic	Unincorp. County and XX Municipalities	After deactivation of plan.	In-house staffing or partner with local universities to conduct research.
Finance	RM-10	Communicating with & Involving the public in Recovery and Redev. Issues	Utilize Visioning Process for severely impacted areas: The Visioning Process found in Appendix D should be utilized to avoid piecemeal redevelopment and include citizen participation.	Major & Catastrophic	Unincorp. County and XX Municipalities	After completion of damage and habitability assessments.	In-house staffing. Funding needed for advertising and facilitation/planning services.
Infrastructure	RM-14	Limiting Redevelopment in Hazardous Areas	Establish Revitalization, Redevelopment, & Infill Overlays (RRIO) in areas that experienced severe wind damage: This mechanism for redevelopment already exists within the Comprehensive Plan. Establishing RRIOs in those areas damaged significantly by a storm event (but not due to surge or flood) could encourage redevelopment and designate them as preferred receiving area for the county's TDR program. Incentives or grants for redevelopment could be prioritized for these areas.	Major & Catastrophic	Countywide	Immediately following analysis of DAT findings.	In-house staffing.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Infrastructure	RM-15	Limiting Redevelopment in Hazardous Areas	Down-zoning undeveloped parcels in hazard-prone areas: Where parcels have not been permitted for development and remain vacant (or where the parcel's existing use is not as high as the allowable use), post-disaster down-zoning should be explored as a means to reduce vulnerability to hazards. The post-disaster period provides an opportunity for the County to achieve a valid redevelopment and mitigation initiative.	Major & Catastrophic	Countywide	Immediately following analysis of DAT findings. Include as part of community visioning process.	In-house staffing.
Land Use	RM-16	Limiting Redevelopment in Hazardous Areas	Initiate municipal cooperation in Transfer of Development Rights program: The county Comprehensive Plan commits to establishing a countywide, multi-jurisdictional TDR program (FLUE, Policy 2.6-p). With the vast majority of coastal properties in municipalities, the County should explore transferring the development rights of damaged coastal properties to the less vulnerable inland locales.	All	Countywide	Immediately following analysis of DAT findings. Include as part of community visioning process.	In-house staffing.
Land Use	RM-19	Including Mitigation in Rebuilding	Institute landscaping & invasive vegetation public education campaign: Non-natives are poorly adapted to the local environment and are more likely to topple or become wind borne, thus causing damage during storm events. Preventing citizens from purchasing and landscaping with them will create a safer, redeveloped community. PBC could team with major lawn and garden centers to reach more citizens (Art. 14 of ULDC).	All	Countywide	Once commercial/retail centers are again operational.	Printing costs for educational materials could be solicited from partner companies. Cooperate with enviro. & ag. groups on outreach efforts.

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Responsible Working Group*	ID	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Approx. Timeframe	Funding Considerations**
Land Use	RM-23	Including Affordable Housing in Redevelopment Projects	Create Community Land Trusts: County can promote & assist in the formation of CLTs to preserve existing and reconstruct lost affordable housing. The CLTs can be used in post-disaster visioning process as a vehicle for implementation.	Major & Catastrophic	Countywide	During redevelopment visioning process.	Typically funded through grants to start. Disaster Recovery Fund could provide some assistance.
Land Use	RM-24	Disaster Resistant Public Funding Decisions	Public Facility retrofits/repairs built to exceed current standards: When retrofitting/reconstructing public facilities, the County can exceed current FBC standards in order to improve mitigation efforts, secure publicly funded investments, and set an example for citizens.	All	Unincorp. County and XX Municipalities	After completion of damage and habitability assessments.	Increased costs but may lower insurance and future repair costs.

* See Section 3 for a list of Working Group Chairpersons or Appendix D for a suggested list of Working Group contributing members

** See Appendix D for funding source information.

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5. MAINTENANCE OF THE PLAN

5.1 Updating and Revision Process

The Update and Revision Process for the PDRP will be a two-part procedure. A significant reassessment and rewrite will be undertaken every 5 years and a smaller review and update will occur annually prior to the beginning of the hurricane season. In both cases, the PDRP Executive Committee will rely upon the issue-specific expertise of the Working Groups for insight on particular aspects of the plan. Palm Beach County's Division of Emergency Management staff, particularly the Senior Mitigation Planner, will provide administrative and technical support during both update processes.

Annual Review of the PDRP

Each Working Group should evaluate the actions falling under its supervision annually and provide the Executive Committee with a status report of any accomplished or started actions, as well as a list of the pre-disaster actions it plans to tackle during the next year. In addition, the Working Group should solicit input for new actions to be added to the Plan and include these in the status report. The Working Groups may also wish to address any needs for new members and tentatively assign staff to work on post disaster actions in the event of a disaster happening that year.

During the annual review, the Executive Committee will meet to discuss the Working Groups status reports, address any membership or leadership changes, and discuss increasing municipal involvement in the PDRP if needed. Following this meeting, the Committee Chairperson(s) and County Senior Mitigation Planner will be responsible for preparing a brief PDRP status report for the County Commission due June 30th every year. The report will also be distributed to the municipalities. A copy of the report should also be included in **Appendix C**.

Five-year PDRP Revision

On a five-year cycle, the entire plan should be reviewed for its functionality taking into consideration any new experiences in post disaster recovery and redevelopment in Palm Beach County or other locations. **Section 1.1** may need updating to include new municipalities that have adopted the plan and the supporting documentation should be added to the appendices. Any changes to relevant plans and policies should be noted in **Section 1.3** and/or **Appendix B**. Every issue in **Section 2** and corresponding action in **Section 4** should be analyzed to ensure each task appropriately addresses the current state of affairs in Palm Beach County. Working Groups should be involved in brainstorming sessions to discover if there are any new issues or actions that should be added to the Plan. The County Senior Mitigation Planner should research new post disaster literature for additions and/or revisions to the Plan. Public input can be solicited through a public meeting or via the internet for revisions and ideas for new issues and actions. Assuming annual reviews were done thoroughly

and those revisions made to the PDRP Action Plan each year, the 5-year major revision should be a manageable process for the PDRP Executive Committee and supporting staff to complete in just a few months. The County Senior Mitigation Planner, in his role as lead staff liaison to the PDRP Committee, will be responsible for compiling draft revisions. The PDRP Committee should present the document to the Recovery Branch Chief and, subsequently, the Board of County Commissioners for re-adoption at the conclusion of the 5-year major revision process. The municipalities should also renew agreements or re-adopt.

5.2 Continuation of the PDRP Committee and Working Groups

The PDRP Executive Committee membership should be renewed annually to assure an effective continuation of the plan. Where the defined department head is unable to serve or participate in certain meetings, a designee with appropriate decision making authority should serve as an empowered delegate. Despite non-participation, the department head retains responsibility of decisions and actions taken by their delegate. The Senior Mitigation Planner with the County Division of Emergency Management shall serve as lead staff to the Committee. This staff person will be in charge of re-establishing the Committee and maintaining an annual meeting schedule upon which the revision and updating process will be based.

The Working Groups described in **Section 3.2** should also be involved in the revision and updating process. Just as implementation of the plan is more efficient divided among the Working Groups, the revision process will be more thorough by allowing these specific bodies to evaluate their focus areas. Once the Mitigation Planner has reconvened the PDRP Committee, it shall be the Working Group Chairperson's responsibility to coordinate Working Group meetings. The Mitigation Planner should, however, check with the Working Group Chairs to make sure their groups are on track.

Appendix A
Issues Index, Acronyms, and Glossary

A.1 Index of Post Disaster Issues Covered in Plan

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Fair and Equitable Distribution of Disaster Assistance	pg. 2-4
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A.4 Acronyms

AMA	American Medical Association
APA	American Psychological Association
BGEGS	Building Code Effectiveness Grading Scale
BID	business improvement district
BOAF	Building Officials Association of Florida
CCCL	Coastal Construction Control Line
CEMP	Comprehensive Emergency Management
CERT	Community Emergency Response Team
CLASC	Conservation Land Acquisition Selection Committee
CLT	community land trust
COOP	Continuity of Operations Plan
DAT	Damage Assessment Team
FBC	Florida Building Code
FDCA	Florida Department of Community Affairs
FDEP	Florida Department of Environmental Protection
FDOF	Florida Division of Forestry
FEMA	Federal Emergency Management Agency
FPL	Florida Power and Light

GIS	geographic information system
HMGP	Hazard Mitigation Grant Program
IBHS	Institute for Business and Home Safety
LMS	Local Mitigation Strategy
NOAA	National Oceanic and Atmospheric Administration
NGO	non-governmental organization
PA	Public Assistance
PBC	Palm Beach County
PDRP	Post Disaster Redevelopment Plan
RRIO	Revitalization, Redevelopment, and Infill Overlay
SAMHSA	Substance Abuse and Mental Health Services Administration
SBA	Small Business Administration
SFWMD	South Florida Water Management District
SWA	Solid Waste Authority
TDR	transfer of development rights
ULDC	Unified Land Development Code
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture

A.5 Glossary

Business Improvement District (BID). A business improvement district (BID) (also known as a special improvement district or a business improvement area) is a public/private sector partnership in which property and business owners of a defined area elect to make a collective contribution to the maintenance, development and marketing/promotion of their commercial district.

Charette. A charette is an urban planning technique for consulting with all stakeholders. Charettes are typically intense, possibly multi-day meetings involving municipal officials, developers, and local residents. A charette promotes joint ownership of the solution and attempts to diffuse traditional confrontation between residents and developers.

Coastal Construction Control Line (CCCL). The line established pursuant to the provisions of Section 161.053, F.S., and recorded in the official records of the county, which defines that portion of the beach dune system subject to severe fluctuations based on a 100-year storm surge, storm waves, or other predictable weather conditions. The Florida Department of Environmental Protection must permit any construction seaward of the CCCL.

Community Land Trust (CLT). A community based housing development non-profit that seeks to promote affordable/workforce housing development through the acquisition of parcels of land in perpetuity for conveyance under long-term ground leases. Ownership of any structural improvements located on the leased parcels is transferred to the lessees, or the CLT can purchase the improvements by a formula designed to ensure properties remain in workforce housing.

Community Redevelopment Center (CRC). A resource center based in severely affected communities throughout the county and staffed by county employees of various departments. The centers will provide information to citizens and the media, assist in the preparation of housing and financial assistance applications, and coordinate local redevelopment planning functions.

Comprehensive Emergency Management Plan (CEMP). Operations plan required under Chapter 252.38(1), Florida Statutes, that defines the organizational structure, chain of command, and operational procedure for the preparation, response and recovery and mitigation efforts associated with an emergency. The CEMP includes a basic plan as well as a recovery annex and a mitigation annex.

Comprehensive Plan. A legislative act of local governments, required for all municipalities and counties in Florida set forth in Chapter 163, Part II, Florida Statutes, which provides the foundation for developing programs and actions related to the use and development of land, and the provision of public facilities. The Comprehensive Plan includes goals, objectives and policies and a 5-year capital improvements plan, as well as a Future Land Use Map.

Critical Facilities. Locally-designated facilities that are critical to important community functions, such as emergency response and safety operations centers and shelters. A list of these facilities must be included in the Local Mitigation Strategy.

Damage Assessment Survey. A field survey to determine levels of damage for structures and to identify the condition of structures.

Disaster. "Disaster" means any natural, technological, or civil emergency that causes damage of sufficient severity and magnitude to result in a declaration of a state of emergency by a county, the Governor, or the President of the United States. Disasters shall be identified by the severity of resulting damage, as follows:

(a) "Catastrophic disaster" means a disaster that will require massive state and federal assistance, including immediate military involvement.

(b) "Major disaster" means a disaster that will likely exceed local capabilities and require a broad range of state and federal assistance.

(c) "Minor disaster" means a disaster that is likely to be within the response capabilities of local government and to result in only a minimal need for state or federal assistance.

(F.S. § 252.34, 2005)

Disaster Recovery Center (DRC). A multi-agency center organized by FEMA for coordinating assistance to disaster victims.

Disaster Recovery Fund. A funding source to be established for use in implementing the recovery and redevelopment actions highlighted in the Post-Disaster Redevelopment Plan (PDRP). The Fund is to be funded through annual fiscal year allocations and only available for use after a disaster event or to prepare for an event.

Emergency Operations Area (EOA). Palm Beach County is divided into six (6) sections by the Division of Emergency Management. Each area has a designated EOA Center, which serves as a regional emergency operations center handling the various Emergency Support Functions noted in the Comprehensive Emergency Management Plan. These six facilities are operations oriented and are not intended to provide customer service to citizens, a service provided by the Disaster Recovery Center (DRC).

Future Land Use Map (FLUM). A map that displays the different land use zones that regulate future development in the jurisdiction. The Future Land Use Map is a component of the local government Comprehensive Plan.

Local Mitigation Strategy (LMS). The term used in Florida for the local government "hazard mitigation plans" required by the Robert T. Stafford Disaster Relief and Emergency Assistance Act. Pursuant to the federal Disaster Mitigation Act of 2000 (Public Law 106-390), state and local government must develop hazard mitigation plans as a condition of federal grant assistance. The LMS is a community plan to promote hazard mitigation that includes a guiding principles section, a vulnerability assessment, and mitigation initiatives, as well as capital projects.

Long-term Redevelopment. The process of returning all aspects of the community to normal functions and, to the extent possible, to conditions improved over those that existed before the disaster. Long-term redevelopment is the period where improvements and mitigation activities such as strengthening building codes, changing land use and zoning designations, improving transportation corridors, replacing "affordable housing" stock, and restoring economic development activity are considered. Other changes such as quality of life improvements can take place during long-term redevelopment.

Non-Conforming Use or Structure. A land use or structure that currently does not conform to the requirements of the zoning district in which it is located, but that met municipal requirements prior to adoption or amendment of the zoning district regulations.

Post-Disaster Temporary Permit Suspension (aka Building or Development Moratorium). A temporary hold, for a defined period of time, on the issuance of building permits, approval of land use applications or other permits and entitlements related to the use, development, redevelopment, repair, and occupancy of private property in the interests of protection of life and property.

Post-Disaster Redevelopment Plan (PDRP). A plan that is required for coastal communities by Section 9J-5.012(3)(b)(8) of the Florida Administrative Code, and encouraged for inland communities by Section 163.3177(7)(l), Florida Statutes. The purpose of the plan is to act as a single reference for guiding decision-making and action during the difficult disaster recovery period, as well as detailing actions that can be taken before a disaster strikes to speed the recovery process. It addresses disaster recovery and redevelopment issues with long-term implications.

Preparedness. Refers to measures taken by residents to ensure they are ready for a disaster and will respond to it effectively. It includes steps taken to decide what to do if essential services break down, developing a contingency plan, and practicing that plan.

Presidentially-Declared Disaster. A "major disaster" is "any natural catastrophe [...] or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under [the] Act to supplement the efforts and available resources or States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby." (Stafford Act, Pub. L. 106-390, § 302, 2000)

Reconstruction. The long-term process of rebuilding a community's destroyed or damaged housing stock, commercial and industrial buildings, public facilities, and infrastructure.

Repetitive Loss Property. A property that is currently insured for which two or more National Flood Insurance Program losses (occurring more than ten days apart) of at least \$1000 each have been paid within any 10-year period since 1978.

Response. Activities that address the immediate and short-term effects of an emergency or disaster. Response activities are contained within the Emergency Support Functions of the Comprehensive Emergency Management Plan and include immediate actions to save lives, protect property, meet basic human needs, and restore water, sewer, and other essential services.

Short-term recovery. Encompass such activities as damage assessments, public information, temporary housing, utility restoration and debris clearance. Short-term recovery does not include the redevelopment of the built environment, economic sector, or normal social networks. Emergency repairs and minor reconstruction however, will occur during this period.

Visioning. Generic term for the process of identifying, developing and documenting vision and values, leading towards strategy and tactics.

Appendix B

Planning Area, Plan Summaries, and Relevant Policies

B.1 Planning Area

This Post Disaster Redevelopment Plan (PDRP) addresses Palm Beach County and its municipalities as shown in **Map B.1**. Palm Beach is a rapidly growing coastal County in Southeast Florida which also borders Lake Okeechobee. The current estimate of the County population is 1,242,270 residents, as shown in **Table B.1**. All of these people, as well as a large influx of tourists in the county, are at risk from hurricane-force wind damage. Many are also at risk from storm surge and flooding. As detailed in the Palm Beach County Local Mitigation Strategy, portions of the county are vulnerable to many natural and human-caused hazards, however, the greatest risk of a natural disaster that could impact multiple jurisdictions and require a large-scale recovery operation comes from hurricane activity. Eighty-seven percent of the countywide population lives in one of the municipalities that border the ocean or intracoastal waterway. In addition, 15.6% of the population reside within the 100-year floodplain and may be more vulnerable to fresh-water flooding associated with tropical storms and hurricanes (Florida Department of Community Affairs, 2006). Palm Beach County's economy is greatly at risk as well. Agriculture in the western part of the county, which includes some of the largest employers in the county, could be devastated from a major hurricane. A majority of the county's jobs, or 86.6%, however are service oriented, which are also very vulnerable. A major disaster could decrease the population of the county and drastically cut tourism. The county currently generates a little over a billion dollars annually in state sales tax but this may not be the case after a major hurricane. (Palm Beach



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County Business Development Board, n.d.)

Table B.1 Population Estimates by Jurisdiction

Jurisdiction	Population, Census 2000	Population Estimate, 2004	% Change, 2000-2004	% of Total Population (2004)
Unincorporated	521,447	557,228	6.9%	44.9%
Atlantis	2,005	2,151	7.3%	0.2%
Belle Glade	14,906	14,956	0.3%	1.2%
Boca Raton	74,764	79,838	6.8%	6.4%
Boynton Beach	60,389	65,208	8.0%	5.2%
Briny Breezes	411	412	0.2%	0.0%
Cloud Lake	167	170	1.8%	0.0%
Delray Beach	60,020	63,439	5.7%	5.1%
Glen Ridge	276	276	0.0%	0.0%
Golf Village	230	228	-0.9%	0.0%
Greenacres City	27,569	30,533	10.8%	2.5%
Gulf Stream	716	717	0.1%	0.1%
Haverhill	1,454	1,516	4.3%	0.1%
Highland Beach	3,775	4,019	6.5%	0.3%
Hypoluxo	2,015	2,472	22.7%	0.2%
Juno Beach	3,262	3,591	10.1%	0.3%
Jupiter	39,328	46,072	17.1%	3.7%
Jupiter Inlet Colony	368	378	2.7%	0.0%
Lake Clarke Shores	3,451	3,473	0.6%	0.3%
Lake Park	8,721	9,105	4.4%	0.7%
Lake Worth	35,133	35,574	1.3%	2.9%
Lantana	9,404	9,526	1.3%	0.8%
Manalapan	321	339	5.6%	0.0%
Mangonia Park	1,283	2,519	96.3%	0.2%
North Palm Beach	12,064	12,535	3.9%	1.0%
Ocean Ridge	1,636	1,657	1.3%	0.1%
Pahokee	5,985	6,240	4.3%	0.5%
Palm Beach	9,676	9,662	-0.1%	0.8%
Palm Beach Gardens	35,058	42,384	20.9%	3.4%
Palm Beach Shores	1,269	1,474	16.2%	0.1%
Palm Springs	11,699	13,853	18.4%	1.1%
Riviera Beach	29,884	32,916	10.1%	2.6%
Royal Palm Beach	21,523	29,261	36.0%	2.4%
South Bay	3,859	4,079	5.7%	0.3%
South Palm Beach	1,531	1,531	0.0%	0.1%
Tequesta Village	5,273	5,648	7.1%	0.5%
Wellington	38,216	49,582	29.7%	4.0%
West Palm Beach	82,103	97,708	19.0%	7.9%
Countywide Total	1,131,191	1,242,270	9.8%	100.0%

Source: University of Florida, Bureau of Economic and Business Research, 2004.

B.2 Plan Summaries

Palm Beach County Comprehensive Plan

Chapter 9J-5 of the Florida Administrative Code (hereafter referred to as 9J-5) requires that several post disaster issues be addressed either as part of the data and analysis for the comprehensive plan or as policies in the comprehensive plan elements. Palm Beach County has addressed most of these requirements and has also included some other policies that relate to post disaster redevelopment. The specific requirements are included in **Appendix B.3**, along with the County's Comprehensive Plan policies that support post disaster redevelopment. The following data and analysis items prepared for the comprehensive plan are also crucial to the PDRP, as this information will be needed to make redevelopment decisions should a disaster destroy part of the County:

- existing land use map, including depiction of wind, flood/surge, and other natural hazard zones
- future land use map, including depiction of natural hazard zones and areas in need of redevelopment
- inventory of public facilities and infrastructure within 100-year special flood hazard areas and coastal high-hazard areas
- inventory of private structures and public facilities with a history of repeated damage from natural disasters
- inventory of beach and dune areas susceptible to erosion from coastal storms and floods
- inventory of erosion protection structures
- development suitability analysis for vacant and undeveloped land

(Florida Department of Community Affairs, 2005b)

Palm Beach County's Comprehensive Plan has several policies in its Coastal Management Element (CME) that govern repair of private structures and guide redevelopment to reduce hazard vulnerability. Policy 2.5b of the CME prohibits the rebuilding of non-conforming uses that have experienced substantial damage in highly vulnerable areas and requires rebuilt structures to be brought up to code. This policy is vital to the goals of the PDRP but it could be strengthened by defining the vulnerable areas so that there can be no debate whether this policy applies to a structure or not. Policy 2.5d shows the County's commitment to enforcing regulations and codes which mitigate hazards and says that they will be applied to eliminate unsafe conditions and inappropriate uses. If this policy is followed during redevelopment then the County will be making strides to a more sustainable community. Policy 2.5c suggests methods such as transfer of development rights and acquisition programs as ways of compensating property owners who may be affected by the previous policies and also states the County's intent to use vulnerable lands that cannot be rebuilt for recreational and preservation purposes. Policy 1.2d in the Future Land Use Element also suggests a creative solution to directing development away from natural

resources which in many cases are an important mitigation feature. It allows density transfers if the development includes affordable housing, uses the transfer of development rights program, is in a special overlay district, or is using one of the cited development types. Another requirement that the comprehensive plan covers is to include a policy for incorporating the recommendations of interagency hazard mitigation reports. Integration of post disaster redevelopment issues into the comprehensive plan is integral to efficient implementation and Policy 2.5e of the CME actually identifies the need for post disaster recommendations in particular to be included to “avoid future destruction and loss of life”. This policy will ease the process of incorporating the recommendations from this PDRP. (Palm Beach County, 2005)

There are a couple 9J-5 policy requirements related to post disaster redevelopment that are not well addressed by Palm Beach County’s Comprehensive Plan. An important requirement is that there be a policy which “distinguishes between immediate repair and cleanup activities... and long term repair and redevelopment activities (§9J-5.012(3)(c)(5), *F.A.C.*.” No policies were found during this review that defines these activities. Also, Policy 1.4c of the Capital Improvements Element and Policy 2.2a of the CME state that the County “shall not use public funds for infrastructure expansion or improvements, or development subsidization in coastal high-hazard areas” with a few exceptions. This partially deals with the requirement to address removal, relocation, or structural modification of damaged infrastructure but the policies do not address infrastructure in all areas but only those in the coastal-high hazard area and they do not specifically speak to infrastructure that is damaged from a natural hazard. These details could be included or a new policy added to insure that damaged infrastructure throughout the county is not being rebuilt without addressing hazard mitigation. (Palm Beach County, 2005)

The County’s Comprehensive Plan also has a few policies that are not required but do support the PDRP. Recognizing the jurisdictional fragmentation of Palm Beach County, several policies highlight the County’s commitment to working with all municipalities and governmental agencies in order to respond properly and efficiently to hazards. Policy 2.2g in the Public Schools Facilities Element is also significant since it addresses the need to designate long-term shelters so that schools being used as emergency shelters can receive students again after a storm. (Palm Beach County, 2005)

Local Mitigation Strategy

The LMS is an integral component of any local government’s hazard and disaster planning efforts. It contains goals and objectives, programs, and countywide initiatives or projects that seek to reduce vulnerability to various hazards. It also contains a valuable hazard inventory and vulnerability assessment that is essential for establishing redevelopment priorities for areas of the county which are most susceptible to damage or destruction.

Several of the LMS's goals and objectives support post disaster recovery and redevelopment issues and they can be found in **Appendix B.3**. Goal 8 explicitly highlights the intent to "facilitate orderly recovery and redevelopment" while "minimiz[ing] economic disruption following a disaster". Most of the goals primarily address pre-disaster mitigation since this is the purpose of the plan, however, these mitigation goals should also be considered in any redevelopment efforts. Goal 2 calls for sound fiscal policy through long range planning to create a more sustainable community. The later stages of the redevelopment process are ideal for introducing mitigation techniques that can increase disaster resiliency. (The disaster cycle stages are described in **Section 1**). Goals 5, 7, and 9 note the intent to foster cooperative relationships and a commitment to hazard mitigation across all levels of government and the private sector. This is an essential component of any successful disaster planning effort and will be echoed in this plan.

The LMS appendices contain a lot of useful information for post disaster planning. In Appendix A of the LMS, tables detail the relative risk and vulnerability of the County and each municipality to all of the hazards described in the LMS. This information can be used to assist the municipalities in integrating post disaster issues into their comprehensive plans by narrowing down in what ways they may be affected in a natural disaster. Appendix B of the LMS includes a list of hazard mitigation initiatives for the County and municipalities. Some post disaster related projects could also be included in this list. Appendix C includes maps of the hazard areas as well as critical facilities which would assist in repair and redevelopment decisions. Appendix J of the LMS cites the County's ability to provide a list of all repetitive loss properties as well as map them through the County's extensive geographic information system (GIS). The GIS data that has been collected for the LMS can be easily modified for use in post disaster planning as well. Technology such as this, as long as most of the data is already assembled, allows for the kind of flexibility that is needed to quickly plan for the rehabilitation of an area that has been greatly affected by a storm.

Comprehensive Emergency Management Plan

The Palm Beach County CEMP addresses activities which must be conducted during the immediate post disaster response period. In the extreme, disaster reconstruction and redevelopment can last for years, but the initial response must be swift and efficient. The swift, initial response collects valuable information and establishes a framework for community outreach, both of which are built upon to achieve more effective long-term redevelopment. The CEMP and the corresponding Recovery Annex were reviewed to determine levels of organization, coordination between entities, and the essential tasks to be undertaken.

The CEMP clarifies County departmental recovery responsibilities. There is only a brief mention of coordinating with municipalities or State and Federal agencies. The recovery activities noted in the basic

plan that are relevant to the PDRP include the damage assessment survey and procedures, public assistance services, housing habitability assessment, and formation of Community Relations Teams (CRTs) that will conduct information dissemination activities. The data gleaned from the above activities helps the PDRP Executive Committee decide the level of storm severity and the proper actions to be implemented. Also, there is a short- and long-term component to some of the recovery activities noted in the CEMP. For example, debris management is an immediate response ESF activity, but the choice of collection sites, adjacent land use compatibility, and possible residual pollution has long-term repercussions for redevelopment, and thus, the issue will be addressed in both the CEMP and PDRP.

The Recovery Annex provides greater detail on the PDRP-related subjects listed above, including a task list for each department. The Damage Assessment process is split into two sub-tasks, the initial survey and a validation procedure with State or Federal officials. The Individual Assistance Section highlights the Disaster Recovery Center (DRC) operations, although locations are not defined. Community relations efforts, emergency housing, communication with the Unmet Needs Committee (UNC), debris management, and local governmental assistance for grant applications all receive mention. A brief description of a post disaster procedure for building permits and a pre-disaster inventory of available vacant office space are included in the concluding section of the plan.

At this writing, the Palm Beach County CEMP was undergoing major revisions for its 2006 update. Text has been added referencing the Post Disaster Redevelopment Plan. Subsequent revisions will include more content from the PDRP.

B.3 Relevant Policies

Florida Regulations related to Post Disaster Redevelopment

Florida Statutes 163.3177(7)(l) Local governments that are not required to prepare coastal management elements under s. 163.3178 are encouraged to adopt hazard mitigation/post disaster redevelopment plans. These plans should, at a minimum, establish long-term policies regarding redevelopment, infrastructure, densities, nonconforming uses, and future land use patterns. Grants to assist local governments in the preparation of these hazard mitigation/post disaster redevelopment plans shall be available through the Emergency Management Preparedness and Assistance Account in the Grants and Donations Trust Fund administered by the department, if such account is created by law. The plans must be in compliance with the requirements of this act and chapter 252.

F.A.C. 9J-5.012 (2) Coastal Management Data And Analysis Requirements. The element shall be based upon the following data and analyses requirements pursuant to subsection 9J-5.005(2), F.A.C.

(a) Existing land uses in the coastal planning area shall be inventoried. Conflicts among shoreline uses shall be analyzed and the need for water-dependent and water-related development sites shall be estimated. Any areas in need of redevelopment shall be identified. An analysis of the economic base of the coastal planning area based on the future land use element shall be included. A map or map series showing existing land uses and detailing existing water-dependent and water-related uses shall be prepared.

(e) The following natural disaster planning concerns shall be inventoried or analyzed:

2. Post disaster redevelopment including: existing and proposed land use in coastal high-hazard areas; structures with a history of repeated damage in coastal storms; coastal or shore protection structures; infrastructure in coastal high-hazard areas; and beach and dune conditions. Measures which could be used to reduce exposure to hazards shall be analyzed, including relocation, structural modification, and public acquisition.

3. Coastal high-hazard areas shall be identified and the infrastructure within the coastal high-hazard area shall be inventoried. The potential for relocating threatened infrastructure shall be analyzed.

F.A.C. 9J-5.012 (3)(b)(8) Prepare post disaster redevelopment plans which will reduce or eliminate the exposure of human life and public and private property to natural hazards;

F.A.C. 9J-5.012 (3)(c)(5) Post disaster redevelopment including policies to: distinguish between immediate repair and cleanup actions needed to protect public health and safety and long-term repair and redevelopment activities; address the removal, relocation, or structural modification of damaged infrastructure as determined appropriate by the local government but consistent with federal funding provisions and unsafe structures; limiting redevelopment in areas of repeated damage; and, policies for incorporating the recommendations of interagency hazard mitigation reports, as deemed appropriate by the local government, into the local government's comprehensive plan when the plan is revised during the evaluation and appraisal process;

F.A.C. 9J-5.012 (3)(c)(6) Identifying areas needing redevelopment, including eliminating unsafe conditions and inappropriate uses as opportunities arise;

Palm Beach County Local Mitigation Strategy Goals and Objectives related to Post Disaster Issues

Goal 2. To achieve safe and fiscally sound, sustainable communities through thoughtful long-range planning of the natural and man-made environment.

Goal 5. To optimize the effective use of all available resources by establishing public/private partnerships, and encouraging intergovernmental coordination and cooperation.

Goal 7. To consistently increase the level of coordination of mitigation management concerns, plans and activities at the municipal, county, state and federal levels of government in relation to all hazards.

Goal 8. To establish a program that facilitates orderly recovery and redevelopment, and minimizes economic disruption following a disaster.

Objective 5. Speed community recovery when disasters occur.

Anticipated benefits attributed to adoption of LMS: Compliance with Administrative Rules 9G-6 and 9G-7, Florida Administrative Code (F.A.C.), requirements for local comprehensive emergency management plans to identify problem areas and planning deficiencies relative to severe and repetitive weather phenomenon, and to identify pre- and post disaster strategies for rectifying identified programs.

Palm Beach County Comprehensive Plan Excerpts related to Post Disaster Issues

Capital improvements Element

CIE P 1.4-c The County shall not utilize public funds for infrastructure expansion or improvements in coastal high-hazard areas unless such funds are necessary to:

1. Provide services to existing development;
2. Provide adequate evacuation in the event of an emergency;
3. Provide for recreational needs and other appropriate water-dependent uses; or
4. Maintain the urban level of service. (9J-5.016(3)(b)2)

Intergovernmental Coordination Element

ICE P 1.3-g The County, through the Emergency Management Division of the Public Safety Department, shall implement strategies identified in the Palm Beach County Comprehensive Emergency Management Plan and the Palm Beach County Post-Disaster Redevelopment Plan to address the following: 1. Coordination with all pertinent municipalities, local, regional or state agencies to assure an efficient and timely evacuation process in the case of a hurricane event; 2. Coordination with state and federal government, Palm Beach County municipalities, other counties and agencies to respond to natural or manmade disasters in the coastal area.

Coastal Management Element

CME GOAL 2 COASTAL DEVELOPMENT AND EMERGENCY MANAGEMENT It is the GOAL of Palm Beach County to protect human life by limiting public expenditures in areas subject to destruction by natural disasters within the coastal high hazard area, maintaining and implementing a safe and effective emergency management program, and providing for orderly redevelopment in a post disaster period. [9J-5.012(3)(a)]

- CME O 2.2 Public Subsidy of New Coastal Development Palm Beach County shall not subsidize new or expanded development in the coastal area. [9J-5.012(3)(b)5]
- CME P 2.2-a The County shall not use public funds for infrastructure expansion or improvements, or development subsidization in coastal high-hazard areas unless such funds are necessary to: provide services to development approved prior to the implementation of this policy, provide adequate evacuation (in the event of emergency) of existing developments; to maintain the urban level of service; or provide for recreational needs, other appropriate water-dependent uses, and natural resource restoration or enhancement.
- CME O 2.3 Development in High Hazard Area Palm Beach County shall direct population concentrations away from known or predicted coastal high-hazard areas, and shall not approve increases in population densities in the coastal high hazard area. [9J-5.012(3)(b)6,7]
- CME P 2.3-a The County shall not increase densities in the coastal high hazard area.
- CME P 2.3-c Infill or redevelopment densities and intensities in coastal high hazard areas shall be consistent with existing adjacent development but at densities and intensities no greater than the adopted future land use designations. [9J-5.012(3)(c)7,9]
- CME P 2.4-d Palm Beach County shall maintain a Local Mitigation Strategy program (LMS) with the purpose of developing and implementing a unified approach among County and municipal governments for dealing with identified hazards and hazard management problems. The program's primary objectives shall:
1. Improve the community's resistance to damage from identified natural, technological, and social hazards;
 2. Increase Palm Beach County's eligibility for receiving local, state, federal, and other mitigation funds;
 3. Reduce the cost of disasters; and
 4. Expedite post disaster community recovery.
- CME O 2.5 Post Disaster Redevelopment Palm Beach County, through the Emergency Management Division of the Public Safety Department, shall reduce or eliminate the risks associated with natural hazards through the implementation and maintenance of the Palm Beach County Post Disaster Redevelopment Plan.
- CME P 2.5-a The County shall coordinate with applicable local governments and agencies, via the countywide operational structure and emergency activities of its Comprehensive Emergency Management Plan, to implement and update as necessary, its Post Disaster Redevelopment Plan to reduce or eliminate the exposure of human life and public and private property to natural hazards. [9J-5.012(3)(c)3,5,14]
- CME P 2.5-b The County shall prohibit the rebuilding of non-conforming uses that have experienced damage of greater than or equal to 50 percent of value, in areas most vulnerable to the effects of storms. When structures are rebuilt, they shall be required to be brought up to code. [9J-5.012(3)(c)3,5]
- CME P 2.5-c The County shall explore the applicability of using transfers of development rights and other programs for the acquisition of property or property rights, as methods of compensating property owners who do not rebuild structures in those areas most vulnerable to the effects of storms. Lands so acquired shall be used for parks and other recreational uses. [9J-5.012(3)(c)3,5]
- CME P 2.5-d The County shall continue to enforce regulations and codes, which provide for hazard mitigation. These include land use, building construction, flood elevation, septic and

sanitary sewer, coastal construction setback, and stormwater facility regulations. These regulations shall also be applied to eliminate unsafe conditions and inappropriate uses. [9J-5.012(3)(c)3,5]

CME P 2.5-e The County shall, pursuant to the Comprehensive Emergency Management Plan, continue recommended hazard mitigation activities, including land development regulations and construction law administration. Post disaster recommendations contained in Hazard Mitigation Plans shall be incorporated to avoid future destruction and loss of life. [9J-5.012(3)(c)3,5]

CME P 3.1-c For disaster preparedness, there shall be a governing policy body to advise and assist in the development and administration of a Local Mitigation Strategy program (LMS). It shall be comprised of representatives who are assigned by each of the 37 municipalities and Palm Beach County, and shall be governed by policies, procedures and/or inter-local agreements.

Health and Human Services Element

HHSE P 4.1-g Palm Beach County will protect the safety of its residents and visitors by developing disaster and emergency management plans and maintaining and implementing programs and services supportive of those plans.

Schools Element

SE P 2.2-g The County shall coordinate with local governments and the School District on emergency preparedness issues which may include consideration of:

1. Design and/or retrofit of public schools as emergency shelters;
2. Enhancing public awareness of evacuation zones, shelter locations, and evacuation routes;
3. Designation of sites other than public schools as long term shelters, to allow schools to resume normal operations following emergency events.

Future Land Use Element

FLUE P 1.2-c The County shall coordinate with coastal municipalities to control population densities in coastal high-hazard areas, in accordance with Coastal Management Objective 2.3. The County shall not increase the density in unincorporated areas located within the coastal high-hazard areas.

FLUE P 1.2-d The County may allow an increase in density greater than the HR-12 Future Land Use category in appropriate areas within the County to direct growth away from natural resources and to use infrastructure more efficiently if the proposed development applies one of the following:

1. The Workforce Housing Program, which allows an opportunity to set aside a certain percentage of units for affordable housing, as described in the policies in Housing Element Objective 1.1 and 1.5;
2. The Transfer of Development Rights (TDR) Program as described in Objective 2.6;
3. The provisions of a Special Overlay as described in Future Land Use Table 2.1- 3; or
4. The Traditional Neighborhood Development, Traditional Marketplace Development, Traditional Town Development, Mixed-use Planned Development districts, or Transit Oriented Development option.

Appendix C Planning Process and Documentation

C.1 Planning Process

PDRP Executive Committee

An integral component to this planning process is the PDRP Executive Committee. The Committee guides the format and content of the Plan. The Executive Committee, shown in **Table C.1**, contains members representing major departments of the County Government, the municipalities, non-profit and countywide organizations, and the private sector. Determining membership in the Committee was a difficult task since the size must be limited so that the Committee can function. The overall structure of the Committee was based on the 1996 Post Disaster Redevelopment Task Team originally created by Resolution No. R-96-1216. The PDRP Executive Committee is led by a designated Chairperson.

Table C.1 PDRP Executive Committee Membership, 2006

Current Member	Job Title	Organization
<i>County Department Representatives</i>		
Verdenia Baker	Deputy County Administrator	Administration
Lorenzo Aghemo	Director	Planning Division
Barbara Alterman	Executive Director	Planning Zoning & Building
Jimmy Beno	Deputy Director	Facilities Development & Operations
Herman Brice	Administrator	Fire and Rescue
Rebecca Caldwell	Director	Building Division
Remar Harvin	Director	Housing & Community Development
Kevin Johns	Director	Office of Economic Development
Earl Mixon	Director	Housing & Finance Authority
Kathleen Scarlett	Director	Purchasing
Charles Tear	Director	Division of Emergency Management
Claudia Tuck	Director	Division of Human Services
Richard Walesky	Director	Environmental Resource Management
George Webb	Director	Engineering
<i>Countywide or Private Organization Representatives</i>		
Mark Bruner	Director, Planning & Environmental Programs	Solid Waste Authority
Charles Lehmann	Director	Tourist Development Council
Paul Russo	Assistant Administrator	Veterans Affairs Hospital
John Sanches	Chief of Facilities	Palm Beach County School Board
Tom Serio	Manager of Continuity Planning	Office Depot
Kelly Smallridge	President	Business Development Board
James Titcomb*	Executive Director	Palm Beach League of Cities
Randy Whitfield	Director	Palm Beach MPO
<i>Municipal Representatives from PBC League of Cities</i>		
Carmen Annunziato	Planning and Zoning Director	City of Boca Raton, LOC District 4
Linda Hodgkins	Mayor	Town of Juno Beach, LOC District 1
Carmine A. Priore	Councilmember	Village of Wellington, LOC District 2
Chuck Shaw	Deputy Mayor	City of Greenacres, LOC District 3
Tony Smith	City Manager	City of South Bay, LOC District 5

* Acting Chairperson

Public Involvement

An important element of any planning process is including the public. During the 2006 major revision to the PDRP, a public workshop was held in March to solicit input from the public, as well as County and municipality staff. The workshop was held early in the plan development phases so that the input could guide the goals of the Plan and what issues were to be addressed. **Section 2** contains a prioritized list of the ten most important issues as voted on at the workshop and also contains four goals developed from workshop participant comments.

Another workshop, made possible through a supplemental grant received from the Public Entity Risk Institute (PERI) and the support of several corporate sponsors, was held in April that focused on obtaining strategies for long-term economic redevelopment. Experts, private and government officials and staff, non-governmental organization representatives, and local business leaders were invited to participate in this workshop which focused on five major topics through in depth break-out sessions: 1) balancing pressures to rebuild quickly with opportunities to rebuild smarter, 2) sustaining essential governmental services in the face of a post disaster economic crisis, 3) business recovery, retention, and workforce redevelopment, 4) strategies for post disaster repopulation and replacement housing, and 5) sustaining and rebuilding quality of life in the aftermath of a catastrophic disaster. The ideas developed during these sessions have been incorporated into **Sections 2 and 4**.

C.2 Documentation of Participation in Plan Drafting

MEETING MINUTES
Palm Beach County – Post Disaster Redevelopment Plan
Kick-Off Meeting for PDRP Advisory Committee
Governmental Center - McEaddy Room
February 22, 2006

ATTENDANCE

Committee

Verdenia Baker
Rebecca Caldwell
Richard Walesky
Dave Karwaski
Kevin Johns
Chuck Tear
George Webb
Sean O'Bannon
Jimmy Beno
Lorenzo Aghemo
Claudia Tuck

Representing

PBC Administration
PBC PZB
PBC ERM
Palm Beach MPO
PBC Economic Development
PBC Emergency Management
PBC Engineering
PBC Fire/Rescue
PBC Facilities Development & Operations
PBC Planning
PBC Human Services

Others

Butch Truesdale
Terry Hess
Kate Boer
Link Walther
Allison Boyd
Zach Galloway

PBC DEM
TCRPC
TCRPC
Continental Shelf Associates
Continental Shelf Associates
Continental Shelf Associates

Mr. Butch Truesdale, Palm Beach County Emergency Management, opened the meeting with a discussion on the purpose of the Post-Disaster Re-development Plan (PDRP) and its importance to the community after a catastrophic event. He noted that municipalities must be involved for the plan to be as effective as possible. The County has already had four events in its history which today would be considered catastrophic, so we should prepare for a future event. He then summarized the legal authority for creating and implementing the plan.

Mr. Truesdale briefed the committee on the upcoming economic summit on April 19, 2006. This summit will draw on experts and breakout discussions on the impacts of disasters, namely hurricanes, on the community.

Mr. Truesdale called for introductions of the meeting participants.

Ms. Allison Boyd of CSA opened her presentation by reminding the committee of the date for the next meeting, March 30, 2006, with the time and place yet to be determined. She then described the outline of the plan, discussing the crosswalks to other plans and summaries of the four existing documents used by the County – Comprehensive Plan, Post-Disaster Re-development Plan (PDRP), Local Mitigation Strategy (LMS), and Comprehensive Emergency Management Plan (CEMP). Critiques and comments were invited.

Mr. George Webb inquired about the timeframe of the PDRP. Mr. Truesdale responded that it may be immediate or once the county is relatively stable after a storm. He highlighted the 60-90 day window of

opportunity. Long range redevelopment is the focus of PDRP so the subject/activity dictates when to use, not necessarily a finite time period. He proposed that the plan should be a “shell” or skeleton” to provide guidance so the County makes the best decisions in the post-storm period. Butch then emphasized the need to locate and put in the plan appropriate funding sources.

Mr. Webb asked how the plan would address the municipal fragmentation of Palm Beach County. Ms. Verdenia Baker stated the need to coordinate with municipalities due to FEMA’s preference for dealing with County governments. Ms. Baker asked that the consultants contact municipalities for their comment. She requested that additional agency representatives as potential committee members be contacted. Those include; County utilities, Solid Waste Authority (SWA), the Palm Beach County Health Department, the Sheriff’s Department, and Palm Beach County School District. Mr. Truesdale acknowledged the need to do this and then turned the meeting back to Ms. Boyd.

Ms. Boyd proceeded to describe the major portions of the plan as presented in the handouts. Section 4 would be the Action Plan in matrix format. She acknowledged the format was still in the draft stage and may be altered, but this portion of the plan should be kept short and efficient for ease of use. Section 5 is the revision and update portion. Ms. Boyd mentioned that the Committee would be needed to review and revise future versions of the plan.

Mr. Chuck Tear inquired about the ability to trigger actions according to the number of days after the storm. Mr. Zach Galloway noted that would be ideal, but it would be difficult to provide definite time periods given the varying levels of storms and destruction. However, Escambia County has used a chronological approach and attempted to estimate the time for each action. Tear suggested following up with Escambia and Lee Counties to inquire about their plans and past attempts at implementation. Mr. Karwaski asked if evaluating the mistakes in NOLA would be beneficial. Mr. Tear thought this a poor idea and best to avoid any research into the post-Katrina activities, even for a “what not to do” evaluation.

Ms. Boyd asked that anyone with ideas, revisions, edits, or items to add contact her. Mr. Link Walther of CSA began his portion of the presentation, turning to the events in Mississippi for examples of what could happen and to find motivation for creating a PDRP that would increase preparedness. Mr. Webb inquired if there was a definition of “catastrophic”. Mr. Walther and Mr. Truesdale both stated Category 4 and 5 storms would be considered catastrophic. Mr. Webb requested more numbers associated with destruction, suggesting 50 percent loss in housing as an example. He then suggested that the PDRP could be applicable for all storms, with different portions being utilized for different levels of storm/event. Mr. Walther then continued, highlighting the need to stay in charge of your own destiny and avoiding being beholden to State or Federal authorities after a storm. Redevelopment should make the community stronger and more disaster resilient. Intergovernmental coordination should be a key tenet in any redevelopment effort.

Mr. Webb asked how the County should handle private communities in the unincorporated areas of the county. Mr. Karwaski noted that public education campaigns could be beneficial. Mr. Tear noted that it is hard for him to contemplate how to rebuild entirely after a catastrophic/major level storm, and suggested strong public education. He then suggested the committee establish a vision for the County. Ms. Baker advised Mr. Tear that the municipalities should be involved in the visioning process. Mr. Webb did note that the County could lead the way for the cities to follow. Mr. Tear asked which cities should be involved. Ms. Baker thought larger communities should be incorporated in the initial process.

Mr. Walther returned to his presentation. He emphasized the need to make tough decisions before the event. The County should engage in intergovernmental coordination processes to ensure the adopted plan is implemented effectively. The County must redevelop smarter and stronger by tying mitigation efforts into the PDRP.

Mr. Truesdale asked if all those in attendance were committed to the effort and understood the importance of a PDRP. Most responded in the affirmative. Ms. Boer called for the plan to take an all-hazards approach, though she acknowledged hurricanes would receive the most attention. Mr. Truesdale then asked that the committee elect a chairman to head the body. After some discussion, which noted

the importance of talking to the cities, Jamie Titcomb and Jimmy Beno were selected as co-chairs to represent the cities and county, respectively.

Meeting adjourned.

**MEETING MINUTES
Palm Beach County – Post Disaster Redevelopment Plan
PDRP Executive Committee
Governmental Center - McEaddy Room
May 25, 2006**

ATTENDANCE

Committee

Jaime Titcomb
Rebecca Caldwell
George Webb
Jimmy Beno
Claudia Tuck

Representing

PBC League of Cities
PBC PZB
PBC Engineering
PBC Facilities Development & Operations
PBC Human Services

Others

Butch Truesdale
Terry Hess
Link Walther
Allison Boyd
Zach Galloway

PBC DEM
TCRPC
Continental Shelf Associates
Continental Shelf Associates
Continental Shelf Associates

The meeting was called to order by Co-Chair Beno a few minutes after 1:30 pm. A discussion centered on the lack of attendance caused by scheduling conflicts. It was agreed that future meeting dates would again be run through B. Truesdale to minimize conflicts with other County functions. Co-Chair Titcomb then initiated a casual conversation regarding the involvement of municipalities in the process. He recommended the plan be presented in draft format to the municipalities so as to avoid a situation where they are asked to accept a final plan without opportunity to comment.

Mr. Beno asked that before decisions are made the meeting be directed toward the agenda items. Mr. Walther provided a brief run down of the meetings, research, and general progress made to date. He noted the Post Disaster Redevelopment Public Meeting was well attended and led to the general acceptance of the disaster scenarios, which are intended to guide activation of the Action Plan. Mr. Titcomb inquired about the composition of attendees. The reply was that there was about an equal mix of county and municipal representatives and a few members of the public. Those in attendance set the priority for the issues.

Ms. Caldwell raised issue with number 8 on the prioritized list, "Ability to Rebuild with Stronger Building Codes." Since the existing building code has not been really tested with a major disaster, the issue would be more appropriately worded in terms of evaluating effectiveness of the existing building code following future disasters, and making appropriate changes based on future damage assessments. This discussion prompted a discussion of all the issues and a clarification that the top ten presented were a part of more than 20 being addressed. Questions were raised about the ability to change building codes at the local level and the effects more stringent codes would have on affordable housing. The applicability of affordable housing in post-disaster redevelopment was questioned. Is the issue affordable housing and/or replacement housing? Ultimately, it was agreed the people living in Palm Beach County at the time of a disaster, should have the right to continue to live in Palm Beach County. Therefore, housing

does affect several elements of recovery and redevelopment for the County and should be addressed in the PDRP.

Ms. Boyd noted that many of the issues addressing redevelopment priorities would be covered at the June meeting. As such, Mr. Beno asked the group to return to the agenda. Mr. Walther continued with a quick summation of the beneficial results of the Post Disaster Economic Redevelopment Workshop, and then noted the work CSA staff has done in researching analogous post-disaster situations and conducting interviews to develop the Action Plan.

Mr. Galloway discussed the Implementation component of the PDRP. Each member of the Executive Committee will chair a Working Group (WG) that is intended to oversee implementation of the tasks in the Action Plan. Members of the Executive Committee in attendance agreed to the structure of the Working Groups. Mr. Beno noted that members should be allowed to volunteer to chair specific WGs, although certain individuals are best suited for certain groups.

Ms. Boyd continued with a description of the Action Plan structure. She noted that the action plan matrices are intended to be a four-part Excel spreadsheet to provide the ability of filtering and sorting actions as needed. The plan is divided into short- and long-term components, and those divisions are further divided into pre- and post-disaster actions.

Mr. Galloway described the two-part up-date and revision procedures needed to maintain efficiency. The WGs would convene annually to discuss what improvements are needed within their focus area. This information would be reported to the Executive Committee for annual revisions prior to hurricane season. Then, following a 5-year cycle, the PDRP would undergo a major revision to ensure data, capacity, and needed actions are all current. This 5-year cycle revision will require a re-adoption by the BOCC.

Mr. Galloway offered a few means to incorporate the municipalities through the PBC League of Municipalities. Mr. Titcomb and others in attendance agreed that having municipal representatives on the Executive Committee based on the 5 districts used in the League of Cities or for EOC operations would be a good idea.

Again, the dates of the future June and July meetings were announced. It was agreed that later start times would be easier for most Committee members. Thus, future meetings will convene at 3:00 pm.

Mr. Beno adjourned the meeting at approximately 3:15pm.

**MEETING MINUTES
Palm Beach County – Post Disaster Redevelopment Plan
PDRP Executive Committee
Governmental Center - McEaddy Room
June 29, 2006**

ATTENDANCE

Committee

Jaime Titcomb - Co-chair
Bruce Thomson (alternate for L. Aghemo)
Dave Karwaski (alternate for R. Whitfield)
Craig Carr (alternate for C. Tuck)
Sean O'Bannon (alternate for H. Brice)

Representing

PBC League of Cities
PBC Planning
PBC MPO
PBC Human Services
PBC Fire/Rescue

Others

Butch Truesdale
Terry Hess

PBC DEM
TCRPC

Kate Boer
Link Walther
Allison Boyd
Zach Galloway

TCRPC
Continental Shelf Associates
Continental Shelf Associates
Continental Shelf Associates

The meeting was called to order by Co-Chair Titcomb a few minutes after 3:00 pm and introductions were made around the table. Mr. Titcomb provided a progress update on the PDRP planning project including the good reception at the League of Cities meeting the preceding day. Lincoln Walther gave a short update of the plan to the municipal representatives at the League meeting and many were interested in being involved with the PDRP committee. At their July 12th meeting they will nominate 5 representatives from each of the geographical divisions of the League to be on the PDRP Executive Committee. Those 5 representatives will be approved by the League later in the month and the new PDRP members should join the July 27th Committee meeting.

Mr. Titcomb then moved into administrative business regarding the Committee leadership. Mr. Jimmy Beno has stepped down as co-chair due to time conflicts. The Committee members present nominated Rebecca Caldwell of the County Building Division to assume the co-chair position. However, citing time conflicts during the post-disaster period, she declined the nomination.

Mr. Truesdale took a minute to explain to those filling in at the meeting for regular committee members why we are on such a short timeframe to finish the plan. Delays in getting the grant contract approved to rewrite the PDRP caused a late start, and unfortunately, the State granted only a very short extension. The plan is due as a deliverable to DCA on August 14th, and therefore, participation in these plan drafting meetings and quick responses to plan drafts sent via email are necessary.

Mr. Titcomb continued with a discussion of other areas that may need representation on the PDRP Executive Committee. He suggested that the school board should be represented. Another member suggested that someone from the Solid Waste Authority should be invited. The Veterans Affairs hospital was suggested as a critical resource and the HERC organization was seen as an overarching group that could represent all health services. The need for business representatives was also noted. Mr. Truesdale pointed out that currently the Committee has only governmental representatives and having a member from the private sector and/or a non-governmental organization would be an improvement. Mr. Truesdale will contact possible representatives from the school board, HERC, SWA, and the business community before the next meeting. Mr. Titcomb will inform us of new municipal representatives – five – from the League.

The next item on the agenda, the draft visioning process, was then presented by Ms. Boyd. Discussion first centered on who would be brought in to assist in visioning exercises in the event of a catastrophic disaster where nearby expertise such as Treasure Coast Regional Planning Council (TCRPC) might not be available. Local expertise and control over the redevelopment process is ideal but some larger national groups may be asked to assist. Ms. Boer suggested that the TCRPC might try to create a continuity plan for itself and would address how it would deal with such a situation. She suggested that if they were unable to assist directly then they could recommend outside expertise and work through them to assist the County. Discussion then moved to an appropriate timeframe to conduct a visioning exercise after a disaster. It was noted that in the Gulf Coast the charettes may have been held too early and for too large of areas, which resulted in the actual residents and property owners of those cities not being properly included. From research of the subject, Mr. Galloway suggested a 6 month period after the disaster may be needed in a catastrophic situation to allow for significant repopulation. The ability to provide temporary housing and other means of communicating with displaced citizens will greatly affect the timeline for a visioning process.

Next, the redevelopment ideals were addressed. These were explained to be ideas to suggest during the visioning process as opportunities to improve redevelopment. The consensus at the meeting was that this may be a touchy subject, given that redevelopment should be an open process that allows citizens to

participate in decision-making. The committee chose to clarify the wording so as to stress the fact that these are suggested options for redevelopment. It was also suggested that these be included in the plan as an appendix.

Presentation of the draft actions to date followed. Actions covered included, redevelopment, mitigation in rebuilding, temporary housing, debris management, and several other issue topics. Some suggestions and questions were noted for further research and will be incorporated into the draft actions distributed before the July meeting.

Mr. Walther then in the time remaining quickly addressed some of the more challenging PDRP issues. Discussion focused on how property rights and political roadblocks underlie much of redevelopment planning and the committee and County must think of creative ways to work with these obstacles. More interviews with experts working on Gulf Coast redevelopment will be conducted in the next month to find out how they have been dealing with these issues.

Mr. Titcomb concluded the meeting with a discussion of how we can most efficiently review and get feedback on the draft plan at the last committee meeting before the plan is due to DCA. It was suggested that the length of the meeting be longer so that there will be time to address all questions and comments before the plan must be finalized. The July 27th meeting will be changed to begin at 2:00pm rather than 3:00pm. It will be imperative that the committee members attend and review the materials before the meeting. The consultants plan to have a draft plan emailed a week before the meeting.

Mr. Titcomb adjourned the meeting at approximately 5:15pm.

**MEETING MINUTES
Palm Beach County – Post Disaster Redevelopment Plan
PDRP Executive Committee
Governmental Center - McEaddy Room
July 27, 2006**

ATTENDANCE

Committee

Jaime Titcomb - Chair
Dave Karwaski (alternate for R. Whitfield)
Claudia Tuck
Tony Luffman (alternate for G. Webb)
Linda Hodgkins
Mark Bruner
Kelly Smallridge
Jimmy Beno
Chuck Shaw
Paul Russo
Tom Serio
Jennifer Simon (alternate for C. Annunziato)
Tony Smith
Rebecca Caldwell
Randall Granberry (alternate for J. Sanches)
Richard Walesky

Representing

PBC League of Cities
PBC MPO
PBC Human Services
PBC Engineering
Town of Juno Beach – LOC District 1
Solid Waste Authority
Business Development Board of PBC
PBC Facilities Dev't & Operations
City of Greenacres – LOC District 3
VA Medical Center
Office Depot-Business Continuity
City of Boca Raton – LOC District 4
City of South Bay – LOC District 5
PBC Building Division
PBC School District
PBC Environmental Resource Mang't

Others

Charlotte Presensky
Pete Berger
Frank Perez

City of Palm Beach Gardens
City of Palm Beach Gardens
FDEM – Disaster Housing

Johnny Gonzalez	City of W. Palm Beach – EM
Butch Truesdale	PBC DEM
Alan Campbell	PBC DEM
Kathryn Boer	TCRPC
Link Walther	Continental Shelf Associates
Allison Boyd	Continental Shelf Associates
Zach Galloway	Continental Shelf Associates

The meeting was called to order by Chairperson Jamie Titcomb a few minutes after 2:00 pm and introductions were made around the room. There was an increase in attendance from previous Executive Committee meetings. Once introductions were complete, Mr. Titcomb proceeded to welcome the new municipal members in attendance, one from each of the League of Cities five districts. He then provided a brief progress report on the planning process and development of this plan, before recognizing Lincoln Walther.

Mr. Walther covered the structural framework of the Plan, a review for some in attendance and introduction of the concept for the newer members. He then asked the committee to remember the plan was dynamic, meaning it needs to be updated and maintained to ensure effectiveness. The major players responsible for activating the plan were noted. This involves a cooperative structure between the Executive Policy Group, Recovery Branch Chief, and the PDRP Executive Committee. The severity of storm/disaster event is categorized as minor, major, and catastrophic. These three categories correspond to the appropriate actions that should be implemented. Mr. Walther then discussed the Working Group structure. The Working Groups are chaired by a member of the Executive Committee and are intended to be flexible to incorporate municipal, private, and various departmental staff as particular situations warrant. Lastly, Mr. Walther expounded upon the importance of maintaining and updating the plan, similar to the cycles required of the Local Comprehensive Plan or Local Mitigation Strategy. The PDRP update process is two-part; (1) an annual review and status report of plan implementation and (2) a major revision every 5 years, which looks at not only progress of the implementing actions, but an assessment of the change of conditions and project/initiative needs.

Mr. Galloway introduced the presentation of the Section 4: Actions Matrix, which attendees had received prior to the meeting date. Rather than presenting on each subject, Mr. Galloway and Ms. Boyd asked that the agenda item take on a directed discussion format. Mr. Galloway asked that the group follow the sequence in which issues were presented in the table and then opened the floor for questions, comments, and proposed edits or revisions. There were numerous questions and comments. Clarifications were provided for certain action items. The consultant team took detailed notes to incorporate these comments into the PDRP in the coming weeks prior to submission of the final deliverable.

Mr. Titcomb asked for final comments regarding the actions before highlighting the importance of providing rapid feedback to the consultant team. The final document must be submitted to the Florida Department of Community Affairs by August 14th, and as such, all comments and proposed revisions should be sent to the consultants by the close of business August 3rd. Mr. Titcomb reminded the committee of the location of the draft documents on the League of Cities website and announced that revisions based on today's comments will be available there when the consultants get those incorporated.

The final agenda item was the selection of chairpersons for the ten Working Groups. There was much discussion and clarification of workload prior to several attendees volunteering and the nominations of others. At present, six of the ten chairs are filled and Mr. Titcomb directed the consultants to select Executive Committee members with appropriate expertise to fill the remaining four positions.

With nominations complete, Mr. Titcomb adjourned the meeting a few minutes after 5:00 pm.

C.3 Documentation of Plan Adoption

Municipal Participation Form

(attach additional sheets as necessary)

Municipality: _____

PBC League of Cities Division (1-5): _____

Municipal PDRP Point of Contact: _____

Contact's email: _____

Contact's phone: _____

Municipality Specific PDRP Issue Priorities (see **Section 2**):

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

New Issues to Propose (optional):

Actions planned to participate in (list Action ID from **Section 4**):

New Actions to Propose (optional):

Municipal Participation Form, cont.

Working Groups planned to participate in (see **Section 3**):

Working Group	Municipal Point of Contact for Working Group

Comprehensive Plan Goals, Objectives, or Policies that relate to Post-Disaster Redevelopment:

Other Municipal Plans or Policy related to Post-Disaster Redevelopment:

C.4 Implementation Documentation and Progress Reports

Appendix D Implementation Tools and Sub-plans

D.1 Working Group Suggested Membership

Each Working Group should include any staff or expertise that is needed to implement the actions assigned to that Working Group. It also should include at least one representative of any municipality participating in actions that fall under that Working Group. Membership is flexible so the suggested organizations listed below may not be needed to participate in the group all the time if the actions being worked on do not pertain to them.

Table D.1 Suggested Agencies and Departments to be represented in a Working Group

Working Group	Suggested Membership
Infrastructure	<p>County: Engineering & Public Works, Solid Waste Authority, Parks & Recreation, Water Utilities, Road & Bridge, Public Affairs, Facilities Development & Operations</p> <p>Other: Private Contractors (e.g., Waste Management), FL Division of Forestry</p>
Land Use	<p>County: Planning, Zoning, GIS, Housing & Community Development, MPO</p> <p>Other: Contractors for visioning and redevelopment (e.g., APA, ULI, CNU)</p>
Building & Housing	<p>County: Housing & Community Development, Planning, Zoning, Building, GIS, Information Systems Services, Facilities Development & Operations, Parks & Recreation</p> <p>Other:</p>
Environment	<p>County: Environmental Resources Management, Administration, Public Affairs</p> <p>Other: FL Division of Forestry, South Florida Water Management District</p>
Communication & Public Education	<p>County: Public Affairs, Emergency Management, Community Services, Legislative Affairs</p> <p>Other: State District Attorney</p>
Finance	<p>County: Financial Management & Budget, Purchasing, Emergency Management, Administration</p> <p>Other: Municipal financial representatives</p>
Administration	<p>County: Administration, Facilities Development & Operations</p> <p>Other: Legislative Affairs, State District Attorney</p>
Government Operations	<p>County: Administration, Financial Management & Budget, Purchasing</p> <p>Other: League of Cities</p>
Economic Development	<p>County: Economic Development Office, Community Revitalization, Small Business Assistance, Tourism Development Council</p> <p>Other: Business Development Board, Workforce Alliance, Economic Council, Enterprise Florida, Small Business Center, World Trade Center</p>
Health & Human Services	<p>County: Human Services, Public Health, Community Services</p> <p>Other: Non-Governmental Organizations (e.g., Red Cross, United Way), HERC</p>

D.2 Summary of Executive Committee and Working Group Responsibilities

The Executive Committee consists of county, municipal, non-governmental organization, and private representatives. Due to inevitable changes in committee composition, the following two sections summarize the responsibilities, both pre- and post-disaster, of the PDRP Executive Committee members so that new members can be briefed:

Executive Committee Member

The following are responsibilities of a member of the Executive Committee:

Plan Implementation

- Votes on recommending activation and deactivation of the Post Disaster Redevelopment Plan to the Recovery Branch Chief and the Executive Policy Group as circumstances warrant.
- Makes decisions and/or contributes to decision making in areas of expertise consistent with the guidelines in this plan and other authorities.
- Organizes and assigns work to Working Groups.
- Coordinates with appropriate governmental officials and decision makers at all levels on the resolution of post disaster recovery and redevelopment issues.
- Ensures that countywide interests are addressed fairly and equitably in the implementation of the plan.
- Works to ensure that needed resources and staffing are provided to accomplish recovery and redevelopment actions.

Plan Maintenance

- Reviews and approves updates and revisions developed by the Working Groups to ensure the accuracy of the Post Disaster Redevelopment Plan.
- Assesses the need to add new issues to the plan.
- Documents regulatory, administrative, staff changes and other developments necessitating changes to the plan. Such changes should be forwarded to the county Senior Mitigation Planner.

Working Group Chairpersons

Members of the PDRP Executive Committee can also serve as a chairperson of one of the Working Groups. There are fewer Working Groups than members of the Executive Committee, which allows for shared responsibilities through co-chairs when necessary. The responsibilities of a Working Group (WG) Chairperson are summarized below:

Plan Implementation

- Selects membership of working group based upon needed skill sets, including various entities such as county departments and divisions, municipalities, non-governmental organizations, and private industry (some are listed in **Appendix D.1**). Works with the League of Cities to coordinate and solicit municipal WG members.
- Notifies WG members and convenes meetings once the PDRP is officially activated by the Executive Committee chair and the Executive Policy Group.
- Decides when and how often to meet, with a greater need in post-disaster periods.
- Oversees progress made toward implementation of the actions, both pre-disaster, preparatory actions and post disaster activities. Informs Executive Committee of related progress through briefs, which subsequently will be presented to the Board of County Commissioners.

- Works to match resources and staffing to recovery and redevelopment actions assigned to the WG and recommends priorities and timing capabilities to the Executive Committee for those actions.

Plan Maintenance

- Convenes update meetings of WG, at least once annually and prior to hurricane season, in order to assess the plan. Depending on the year, the meetings will address the annual review/ edits or the major revision, which should occur every five years.
- With the WG membership, the chair should examine the need for new issues within their expertise and develop new actions.
- Compiles a status report documenting completed actions, actions in progress, actions planned for the next year, new/changed membership, and a change in chairperson of the WG.

D.3 Post Disaster Visioning and Community Participation Process Guide

In the event of a catastrophic disaster, some areas may have suffered concentrated destruction to a degree that major redevelopment of that sector of the community is necessary. Rather than allow this redevelopment to happen piecemeal or, even worse, let the area remain in a prolonged neglected state, a transparent visioning process with community participation could result in an opportunity to make the impacted area better than before. The following process outlines some important steps in involving the residents and businesses of an impacted area in decisions for the future during what could be a difficult recovery period. The appropriate PDRP Working Group to oversee each action is cited.

Determining areas that may need a visioning process for redevelopment

- After the damage assessments are in, use GIS to determine if there are areas of concentrated substantial damage. These areas may result from storm surge, excessive flooding, tornadoes, or simply high winds in relation to a hurricane or could be an area impacted by a catastrophic urban/ wildfire or other type of hazard capable of large paths of destruction. (Land Use WG)
- If a sector of the community with substantial damage to a majority of structures is identified, the appropriate County or city staff should create maps showing the boundaries of the area and the damage it sustained, the future land use for the area, and what the existing uses were. All of this should be available as GIS layers depending on the jurisdiction. If the area of impact is large it should be split into neighborhood units to better enable community participation during the visioning process. (Land Use WG)
- This information should be taken to the PDRP Executive Committee with the recommendation of the planning staff of the jurisdiction as to whether this area is in need of a visioning process before redevelopment is allowed. If the Executive Committee decides that it should go through a visioning process then the Executive Committee Chair(s) should get approval from the Board of County Commissioners or if the area is in a municipality they should recommend this action to the city council. (Land Use WG)
- The area should also be given an extended moratorium to allow time to prepare for a visioning process and make any needed land use or regulation changes before rebuilding begins there. (Building and Housing WG)
- Once a sector has been approved for a post disaster visioning process, a press release of the County or city's intentions should be prepared that includes a description of the area and asks for those residents and businesses from that area to participate through one of the means below (i.e. resource center, website, meetings). It should be noted that the process is not intended to keep people from returning to their neighborhoods and that their right to return is a priority. (Communication and Public Education WG)

Gathering Input and Preparing for a Charette

- Several PDRP actions recommend the creation of regional public information/resource centers throughout the County in the aftermath of a major or catastrophic disaster. These centers may serve several purposes such as disaster financial assistance, temporary housing assistance, mitigation and rebuilding information, and permitting assistance once the moratorium for that area has been lifted. For any area declared for visioning, a resource center should be located there that has information on the visioning process and timeline. Maps, such as those cited above, should be displayed and staff or volunteers should be able to answer questions and record comments. Questionnaires, comment sheets, and maps with markers should be out for interested persons to submit ideas or concerns. Information at the resource center should be available in languages appropriate for the demographics of the impacted area. (Communication and Public Education WG)
- A website should be created with the same information available at the resource center and a means by which people can submit comments as well as a phone number for questions.

- This will provide a way for those citizens who have not returned to the County to begin participating. (Communication and Public Education WG)
- Analyze the risk of rebuilding (by parcel if possible) and make recommendations if mitigation through current standards will prevent a repeat of the destruction or if some areas of the sector are inappropriate for the current future land use designation. Present these findings to the Executive Committee, and after reaching consensus, make available to the public as a technical report to be used in the charette discussions. (Land Use WG)
 - Perform a brief economic analysis of the impacted community as it was before the disaster and determine if there may be substantial changes due to the disaster. Should the area focus economic development in a different direction? Draft a technical report with recommendations to be used in a charette. (Economic Development WG)
 - Stakeholder meetings can be scheduled to focus on the above technical reports and gather public input on how these recommendations could be incorporated into redevelopment plans. These meetings should be facilitated and invite all stakeholders who have returned (residents, businesses, schools, religious institutions, homeowner associations, etc). Media involvement in these meetings should be encouraged to provide information for those who were unable to attend. Proceedings should also be posted on the website. (Communication and Public Education WG)
 - Based on public input and technical reports, visual vision alternatives should be prepared for the impact area that can be debated at the charette. Assistance from experts should be enlisted in preparing these alternative visions. The Treasure Coast Regional Planning Council, Florida Department of Community Affairs, professors and their students from Florida graduate planning and/or urban design departments, American Planning Association, and Urban Land Institute are just a few places where expertise could be sought. The alternative visions should try to incorporate some of the relevant redevelopment opportunities listed in the next section of **Appendix D**. (Land Use WG)

Holding a Charette

- Once there has been enough time for displaced persons to return and general input from the public has been developed into alternative visions, a charette should be scheduled for the impacted area. It should be held in a large meeting space as near the area as possible with appropriate audio-visual equipment. The time and date should be chosen to allow as many to participate as possible. During the day on Saturday may be appropriate if there are still safety issues from the hurricane with travel at night. The scheduled charette should be announced in a press release and advertised through signs in the affected area for several weeks prior. (Communication and Public Education WG)
- Professional facilitation services should be procured (could be a pre-disaster agreement). The visioning charette should create a picture of redevelopment goals for the next 20 or more years. It should be sensitive to private property rights and the possibility of citizen distrust in the process. (Communication and Public Education WG)

Implementing the Vision

- Once a vision has been accepted by the charette attendees, or if necessary a series of charettes, any necessary Comprehensive Plan amendments or Land Development Code changes that would be required to implement the vision should be drafted and reviewed by the legal department in an expedited manner. These should be presented to the Board of County Commissioners, or municipal equivalent where applicable. (Land Use WG)
- After local approval has been obtained, expedited review and approval by the State should be requested so that the moratorium on this area can be lifted and rebuilding can begin. (Land Use WG)

D.4 Ideas for Redevelopment Opportunities to use in Post Disaster Visioning

If major redevelopment were necessary following a disaster, an ideal redevelopment project might include some of the following components:

Open space

- Use hazardous land (i.e. surge/flood risk) for open space uses. These areas could be used for parks, habitat conservation, or simply aesthetic public spaces to enhance the new development.
- Natural drainage areas, beach dunes, and wetlands could be preserved or restored while development is clustered elsewhere. Transfer of development rights or land acquisition programs can be used to compensate landowners.

Mixed-uses

- Redevelopment can turn previous single-use areas into vibrant mixed-use neighborhoods. By mixing commercial with residential, residents can cut the amount of automobile trips and enjoy the healthy convenience of walking to the corner store, café, or perhaps their office.

Mixed-incomes

- Redevelopment projects should provide housing options for mixed-income populations. Including workforce housing helps correct the jobs-housing balance within our community. It also helps to ensure that those displaced by the disaster can afford to return to Palm Beach County.

Alternative transportation designs

- Transit and pedestrian oriented developments use human-scale designs rather than catering to automobile needs. Smaller streets and parking lots, continuous bike lanes/paths, and plentiful sidewalks with access to mass transit encourage healthy lifestyles and reduce pollution and energy consumption.

Safe and green buildings

- Environmentally friendly buildings cut energy consumption by providing natural lighting and other innovative solutions such as green roofs. Combining these innovations with hazard mitigation techniques would result in ideal structures- capable of withstanding hurricanes while also conserving natural resources.

D.5 Creating Community Redevelopment Centers

In the aftermath of a disaster event, citizens are likely to have reduced mobility. However, providing services to those in need is more important at that time than any other. Palm Beach County maintains Disaster Recovery Centers that provide emergency response services and materials, such as food, water, ice, and first aid, in the immediate aftermath. However, in the wake of immense destruction, prolonged assistance and community involvement in the redevelopment effort will be of utmost importance. Community Redevelopment Centers (CRC), as noted in **Table 4.3** of the Action Plan, are envisioned as long-term missions to serve multiple roles throughout the redevelopment process. The following information outlines the selection of CRC locations, general logistics, and the services provided.

Selection of CRC Sites

- The county should attempt to locate centers throughout the county to ensure fair and equitable distribution of assistance and inclusion in the redevelopment decision-making process. In the pre-disaster ‘blue skies’ period, the county can highlight strategic locations that best serve citizens at the local community scale. Given the indefinite amount of time the CRC could be operational, county ownership or flexibility should be one criterion for siting.
- After damage assessment information has been collected, the sites selected pre-disaster can be assessed for usability. Selection of new sites may be necessary due to damage inflicted by the disaster event. Where county properties are not available, a viable option may be local non-profits, faith based facilities, or outdoor tents in community parks.
- Ideally, a CRC could be located in every community in the county to facilitate swift and efficient recovery and redevelopment. Given the anticipated staffing shortfalls, initial efforts should focus on areas that suffered intense concentrated destruction and/or low-income sectors.
- The CRCs should *not* be co-located with the Emergency Operation Area centers, as they are intended to be regional emergency operations centers that serve as hubs solely for employees. There will be no public services provided at the EOA centers.

General Logistical Considerations

- To best serve citizens with reduced mobility, the CRCs are providing functions in the field typically conducted at central county offices. Thus, certain provisions should be available at the CRCs, including standard office supplies, communications technology, and computers – preferably laptops.
- Staff from numerous county departments could be temporarily spread amongst the CRCs. Representatives from Neighborhood & Community Services, Human Services, the Planning Division, and possibly Public Affairs will play roles in the services noted below. Other staff may be needed as conditions of specific communities or disaster events dictate. Services provided at each center may differ depending on the needs of that community and/or staff may alternate on different days of the week to work around possible shortages in staffing the centers.

Services Provided at the Center Redevelopment Centers

- Public information dissemination: The CRCs can act as an information resource for local citizens, regarding any subject affecting the community.
- Media Releases: In an attempt to reach as many citizens as possible, the CRC staff can coordinate with local media outlets to inform residents of important happenings, meetings, and safety advisories.
- Temporary housing assistance: Residents in need of temporary housing funding assistance could come to the CRC to contact a local staffer. Proper paperwork could be filed and funds distributed at the local CRC. Assistance in finding temporary housing could be offered through real estate agents at the center and through a computer set up for public use in searching housing listings.
- Application preparation assistance: There are numerous programs offered to the victims of disaster events. They are often encumbered with extensive paperwork which must be filed by citizens. Staff could be dispersed around the county at the CRCs to provide technical assistance.

- Act as an information center and input gathering station for redevelopment plans as cited in **D.2 Post Disaster Visioning and Community Participation Process Guide**.

D.6 Creating Business Recovery Centers

A business recovery center (BRC) should offer many services to local businesses and especially cater to the small business after a disaster. These centers could be used in even a minor disaster but would probably only be needed for the first week or two and not in as many locations. After a catastrophic disaster these centers could be a lifeline for struggling businesses for up to a year. The actions in **Section 4** include pre-disaster selection of sites and securing of supplies as well as implementation of the sites in the post disaster period. The following elaborates on those actions:

Selection of BRC Sites

- The PDRP Economic Development Working Group should attempt to locate centers throughout the county's business districts to allow for easy access. In the pre-disaster 'blue skies' period, the county can highlight strategic locations that best serve a majority of businesses. One possibility may be siting these in county or municipal offices or at Chambers of Commerce or Workforce Alliance Centers. Partnerships with larger companies to house a BRC may also be a possibility.
- In the event that pre-arranged sites are unavailable due to damage or access issues after a disaster or that more BRCs are needed, vacant offices for rent or other sites not damaged should be considered as well as the possibility of mobile BRCs or trailers set up in strategic parking lots.
- If it is anticipated that the BRCs will be needed for long-term recovery (i.e. due to a major or catastrophic disaster), leases for undamaged or easily repaired office space in at least some regions of the county should be obtained so that these centers can remain open for as long as needed.

Staffing and Supplying the BRCs

- The BRC will need at least one set of typical office equipment, i.e. computer, printer, fax machine, copier, that can be used for short amounts of time for purely business related uses. Rules denying access for personal use and setting time limits will need to be enforced. These supplies could either be available from the host site or could be secured through pre-arranged agreements with office supply and/or electronics stores in the area donating or lending the equipment. A list of the supplies that would be needed at each site should be compiled pre-disaster.
- The BRC will need to be staffed with people who can assist in giving information discussed below as well as people who can monitor use of the center. Volunteers should be used to the degree available through soliciting help from existing volunteer organizations. Temporary employees could also be arranged if needed giving some local disaster victims much needed work. Staff with expertise in business recovery should be available at least some of the time at these sites and can be drawn from the government, non-governmental organizations, and companies, local and national, who can lend knowledgeable employees.

Services provided at the BRCs

- The BRC can provide the following services and possibly others as needs within the business community are gauged after a disaster: help with applying for federal disaster assistance/loans, applications for local/state bridge loans, information/applications for temporary office space provided by the county, basic office and communications equipment for use, message board for networking with other businesses and offering/finding services, a list of services offered by organizations and companies in the county to assist small business (i.e. Office Depot has plans to offer use of internet/fax at its stores), locations of wireless internet hotspots that are operational, access to expert advice on financial and business recovery issues.

D.7 Sub-plans Located in the Emergency Operations Center

The following plans are located in the Palm Beach County Emergency Operations Center library located at 20 South Military Trail, West Palm Beach, Florida 33415:

- Palm Beach County. (2005). Debris Management Plan.
- Palm Beach County. (2005). Temporary Housing Plan for Catastrophic Events.

D.8 Common Post-Disaster Funding Sources

Program	Agency	Assistance Provided	Eligibility*
Emergency Loans	USDA, FSA	Low-interest loans to family farmers and ranchers for production losses and physical damage.	I/B
Noninsured Crop Disaster Assistance Program	USDA, FSA	Direct payments to reduce financial losses resulting from a natural disaster that causes production loss or prevents planting of crops grown commercially for food or fiber, for which Federal crop insurance is not available.	I
Conservation Reserve Program (CRP)	USDA, FSA	Voluntary program that offers annual rental payments, incentive payments for certain activities and cost-share assistance to establish approved cover on eligible cropland.	I/B
Farm Operation Loans	USDA, FSA	Loans and loan guarantees to be used for farm operating costs.	I
Emergency Watershed Protection (EWP)	USDA, Natural Resources Conservation Service (NRCS)	Direct payments and technical assistance to install structural and nonstructural measures to relieve imminent threats to life and/or property, and to purchase floodplain easements. Technical assistance such as site evaluations, design work, and installation inspections also are provided through the program.	S/LN/B/I
Water Resources	USDA, NRCS	Project grants for the installation of preventive measures such as dams, channels, flood warning systems, purchasing easements, floodplain delineation, and land treatment. Advisory and counseling services also are available.	S/L/N
Resource Conservation and Development (RC&D)	USDA, NRCS	Technical assistance and loans to finance local project costs. Projects may include land and water conservation, resource improvements, recreational development, and waste disposal projects.	L/N
River Basin Project	USDA, NRCS	Technical assistance. Special priority is given to projects designed to solve problems of upstream rural community flooding, water quality improvement that comes from agricultural nonpoint sources, wetlands preservation, and drought management for agricultural and rural communities. Special emphasis is placed on helping State agencies develop strategic water resource plans.	F/S/L
Federal Crop Insurance Program	USDA, Risk Management Agency (RMA)	Direct payments of insurance claims. Insurance against unavoidable causes of loss such as adverse weather conditions, fire, insects, or other natural disasters beyond the producer's control.	I
Farm Labor Housing and Grants	USDA, Rural Housing Service (RHS)	Loans and grants to provide housing and related facilities for domestic farmers.	I/B
Rural Rental Housing Loans	USDA, RHS	Loans for the purchase, building, or repair of rental housing. Funds also can be used to provide water and waste disposal systems.	I/S/L/B
Emergency Community Water Assistance Grants (ECWAG)	USDA, Rural Utilities Service (RUS)	Project grants to help rural residents obtain adequate water supplies.	S/L/N

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Program	Agency	Assistance Provided	Eligibility*
Water and Waste Disposal Loans and Grants	USDA, RUS	Project grants and direct and guaranteed loans to develop, replace, or repair water and waste disposal systems in rural areas and towns having populations of 10,000 or less.	L/N
Voluntary Organizations Recovery Assistance	American Red Cross, Mennonite Disaster service, Salvation Army, and member organizations of the National Voluntary Organizations Active in Disaster	Mass care (shelter and feeding), welfare inquiries, health and mental health services, child care, home repairs (labor and funding), emergency communications, debris removal, burn services, cleaning supplies, personal property, distribution of supplies, transportation, loan personnel, and other specialized programs and services.	I
Economic adjustment Program-Disaster Economic Recovery Assistance	Dept. of Commerce (DOC), Economic Development Administration (EDA)	Planning and technical assistance grants to State and local governments for strategic recovery planning and implementation to focus on job retention/creation to help offset the economic impacts of a major disaster.	S/L/N
Economic Adjustment Program-Disaster Economic Recovery Assistance	DOC, EDA	Revolving loan fund grants to State and local governments to provide a source of local financing to support business and economic recovery after a major disaster where other financing is insufficient or unavailable.	S/L/N
Economic Adjustment Program-Disaster Economic Recovery Assistance	DOC, EDA	Infrastructure construction grants to address local recovery implementation needs for new or improved publicly owned infrastructure after a major disaster, support job creation and retention, leverage private investment, and help accelerate and safeguard the overall economic recovery of the disaster-impacted area.	S/L/N
Corporation for National Service (CNS) Programs	CNS	Volunteers of all ages/backgrounds provide short/long-term response and recovery assistance. They are available through the community or national deployment.	F/S/N
Emergency Rehabilitation of Flood Control Works or Federally Authorized Coastal Protection Works	DOD, USACE	Specialized services to assist in the repair and restoration of public works damaged by flood, extraordinary wind, wave, or water action.	S/L/N/I
Emergency Water Supply and Drought Assistance Programs	DOD, USACE	Emergency supplies of clean drinking water for human consumption and construction of wells.	L
Flood and Post-Flood Response, Emergency Operations	DOD, USACE	Specialized services, such as flood fighting and rescue, protection of federally constructed shore or hurricane projects, and post-flood response assistance.	S/L

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Program	Agency	Assistance Provided	Eligibility*
Watercourse Navigation: Protecting, Clearing, and Straightening Channels	DOD, USACE	Specialized services, such as clearing or removing unreasonable obstructions to navigation in rivers, harbors, and other waterways or tributaries.	S/L
Community Disaster Loan Program	Federal Emergency Management Agency (FEMA)	Program provides loans not greater than 25% of the local government's annual operating budget.	L
Cora C. Brown Fund	FEMA	Grants to disaster victims for unmet disaster-related needs.	I
Hazard Mitigation Grant Program (HMGP)	FEMA	Project grants to implement hazard mitigation plans and prevent future loss of lives and property.	L/N, via S
Legal Services	FEMA	Free legal advice and referrals. Assistance includes help with insurance claims, counseling on landlord-tenant and mortgage problems, assistance with home repair contracts and consumer protection matters, replacement of legal documents, estate administration preparation of guardianships and conservatorships, and referrals.	I
Public Assistance Program	FEMA	Project grants. Funds can be used for clearing debris, emergency measures, and repairing or replacing damaged structures, roads, utilities, public buildings, and infrastructure.	L/N, via S
Disaster Housing Program	FEMA	Direct-payment grants and services. Grants include transient accommodation reimbursement, and home repair, rental, and mortgage assistance. Services may include a mobile home.	I
Disaster Assistance for Older Americans	HHS, Administration on Aging	Direct payments to State agencies focused on aging-related services.	I, via S
Mental Health Disaster Assistance	HHS, Public Health Service	Project grants to provide emergency mental health and substance abuse counseling to individuals affected by a major disaster.	I, via S
Community Development Block Grant (CDBG) Program - Entitlement Grants	Dept. of Housing and Urban Development (HUD), Community Planning and Development (CPD)	Formula grants to entitlement communities. Preferred use of funding is for long-term needs, but funding also may be used for emergency response activities.	L
CDBG - State's Program	HUD, CPD	Formula grants to States for non-entitlement communities. Preferred use of funding is for long-term needs, but funding also may be used for emergency response activities. States establish methods of fund distribution.	L, via S
Mortgage Insurance for Disaster Victims Program (Section 203 (h))	HUD	Provides mortgage insurance to protect lenders against the risk of default on loans to qualified disaster victims whose homes are located in a presidentially designated disaster area and were destroyed, requiring reconstruction/replacement. Insured loans may be used to finance the purchase or reconstruction of a one-family home that will be the principal residence of the homeowner.	I
Disaster Unemployment Assistance (DUA)	Dept. of Labor (DOL); FEMA	Direct payments of DUA benefits and reemployment assistance services. Objective is to provide assistance to individuals who are ineligible for regular unemployment compensation programs and who are left jobless after a major disaster.	I, via S

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Program	Agency	Assistance Provided	Eligibility*
Employment: Job Training Partnership Act (JTPA), National Reserve Emergency Dislocation Grants	DOL, Employment and Training Administration	Program provides States with grant money to provide individuals with temporary jobs and/or employment assistance.	I. via S
Price-Anderson Act	NRC	Insurance reimburses States and municipalities for costs necessarily incurred in providing emergency food, shelter, transportation, or police services in evacuating the public after a nuclear power reactor accident.	S/L
Economic Injury Disaster Loans (EIDLs)	Small Business Administration (SBA)	Direct long-term, low-interest loans to small businesses and agricultural cooperatives. Loans are only available to applicants with no credit available elsewhere, and the maximum amount of an EIDL is \$1.5 million.	B
Physical Disaster Loans (Business)	SBA	Direct long-term, low-interest loans to businesses and nonprofit organizations. Loans provided to repair or replace uninsured property damages caused by disasters. Loans limited to \$1.5 million.	N/B
Physical Disaster Loans (Individual)	SBA	Direct long-term, low-interest loans to homeowners and renters to repair or replace uninsured damages caused by disasters to real and personal property. Loan amounts limited to \$200,000 to repair or replace real estate, and to \$40,000 to repair or replace personal property.	I
Alcohol and Tobacco Tax Refund	Dept. of the Treasury, Bureau of Alcohol, Tobacco, and Firearms	Specialized services to provide Federal alcohol and tobacco excise tax refunds to businesses that lost assets in a disaster.	B
Taxes: Disaster Assistance Program	Treasury, Internal Revenue Service (IRS)	Advisory and counseling services. IRS provides information about casualty loss deductions, claim procedures, and reconstruction of lost financial records.	I/B
Coastal Zone Management; Hazards, Environmental Recovery, and Mitigation	DOC, National Oceanic and Atmospheric Administration (NOAA)	Assistance to State and local governments in mitigation and recovery/restoration planning, post-event permitting assistance, water-level data for storm-surge, and flooding prediction and mitigation.	S
Re-establishing Local Survey Networks	DOC, NOAA	Provision of survey mark data to local and State agencies for re-establishing their geodetic control networks; re-establishment of national network if warranted.	S/L
Coastal Zone Management Administration Awards	DOC, NOAA	Grants to States for the management of coastal development to protect life and property from coastal hazards.	S/L via S
Coastal Zone Management Fund	DOC, NOAA	Emergency grants to State coastal zone management agencies to address unforeseen or disaster-related circumstances.	S/L/T via S
Technical Support	DOC, NOAA, National Weather Service	Technical assistance for weather, water, and climate warning systems and critical information dissemination systems. Post-storm data acquisition activities.	F/S/L/N/T
Technical Support	DOC, National Institute of Standards and Technology	Disaster damage surveys, assistance, in procurement of consulting services, evaluation of structural and fire performance of buildings and lifelines.	F/S/L

*Eligibility column: F=Federal government, S=state government, L=local government, I=individual, B=business, N=non-profit

Other Funding Resources

Before and After Disasters: Federal funding for cultural institutions. (2005). Federal Emergency Management Agency. Retrieved from www.heritagepreservation.org/PDFS/Disaster.pdf .

Citizen Corps: A guide for local officials. (2002). Retrieved from www.citizencorps.gov/pdf/council.pdf.

Financial and Technical Assistance for Florida Municipalities. (2005). Tallahassee: Florida League of Cities.

D.9 Disaster Organization Contacts

Organizations	Phone Number
Action by Churches Together	41-22-791-6033
ActionAid International	27-11-880-0008
Adventist Community Services	800-424-2372
Ad Council	202-331-9153
AidMatrix	630-235-3542
American Disaster Reserve	804-287-1246
American Medical Association - Center for Health Preparedness and Disaster Response	800-621-8335
American Psychological Association - Disaster Response Network	202-336-5898
American Red Cross	202-303-4498
American Rescue Team	415-533-2231
AmeriCares	800-486-HELP
America's Promise	703-684-4500
America's Second Harvest	800-771-2303
AmeriCorps	202-606-5000
AMURT International	0043-01-971-99-91
Baptist World Aid	703-790-8980
Business Round Table	202-872-1260
Business Civic Leadership Center	202-463-5895
Catholic Agency for Overseas Development	00-44-20-7733-7900
Catholic Charities USA	703-549-1390
Center for Disease Control - National Institute for Occupational Health and Safety	1-800-35-NIOSH
Center for International Disaster Information	703-276-1914
Christian Children's Fund	1-800-776-6767
Christian Disaster Response	863-967-HELP
Christian Reformed World Relief Committee	800-848-5818
Church of the Brethren's Disaster Response	410-635-8748
Committee to Encourage Corporate Philanthropy	212-825-1000
Convoy of Hope	417-823-8998
Corporation for National & Community Service	202-606-5000
CreateHope	202-903-2585
Department of Commerce	202-482-2000
Department of Energy	800-dial-DOE

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Organizations	Phone Number
Department of Homeland Security - Transportation Security Administration	202-282-8000
Department of Interior - Minerals Management Services	202-208-3100
Department of Labor - National Emergency Grant Program	866-4-USA-DOL
Department of Transportation	202-366-4000
Department of Treasury - Community Development Financial Institutions	202-622-2000
Dept of Housing and Urban Development	202-708-1112
Department of Homeland Security	202-282-8000
Department of Homeland Security - Customs and Border Protection	202-282-8000
Direct Relief International	805-964-4767
Disaster Psychiatry Outreach	212-598-9995
Environmental Protection Agency	202-272-0167.
Federal Emergency Management Agency	1-800-621-FEMA
Friends Disaster Service	330-650-4975
Gifts in Kind	703-836-2121
Global Impact	703-717-5200
Habitat for Humanity	229-924-6935
Hands On Network	404-979-2900
InterAction	202-667-8227
International Aid	616-846-7490
International Economic Development Council	202-223-7800
International Relief Friendship Foundation	917-319-6802
Lutheran World Relief	800-LWR-LWR-2
Lutheran Disaster Response	800-638-3522
Mennonite Disaster Service	717-859-2210
Mercy Medical Airlift	703-361-1191 x23
Minority Business Development Agency	888-324-1551
National Congress for Community Economic Development	202-289-9020
National Disaster Medical System	202-282-8000
National Emergency Response Team	207-948-3505
National Governors Association	202-624-5300
National Organization for Victim Assistance	705-535-6628
National Voluntary Organizations Active in Disaster	703-339-5596
Nazarene Disaster Response	800-306-9950
Northwest Medical Teams, International	503-624-1000
Points of Light	202-729-8000
Palm Healthcare Foundation	561-833-6333
Quantum Foundation	561-832-7497
REACT International	214-368-5223
Salvation Army	703-684 5500
Save the Children	203-221-4030
SeniorCorps	202-606-5000
The Arc	301-565-3842
The Society of St. Vincent DePaul	314-576-3993
U.S Conference of Mayors	202-293-7330
U.S. AID- Global Development Alliance	202-712-1500

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Organizations	Phone Number
U.S. Army Corps of Engineers	215-656-6515
U.S. Coast Guard	877-NOW-USCG
U.S. Department of Agriculture	301-504-4539
U.S. Department of Health and Human Services	877-696-6775
U.S. Department of Health and Human Services - Administration on Children and Families	877-696-6775
U.S. Department of Housing and Urban Development	800-333-4636
U.S. Small Business Administration	1-800-U-ASK-SBA
U.S.A. Freedom Corps	1-877-USACORP
UN Office for the Coordination of Humanitarian Affairs	212 963-1234
United Church of Christ	216-736-3211
United Jewish Communities	212-284-6500
United Methodist Committee on Relief	800-554-8583
United Nations Children's Fund	212-686-5522
United States Service Command	336-859-9092
United Way	202-463-6211
US AID	202-712-1500
US AID - Humanitarian Response	202-712-4810
Volunteers of America	800-899-0089
World Economic Forum	41-0-22-869-1212
World Travel and Tourism Council	44-0-870-727-9882
World Vision	235-815-2249

Source: Business Civic Leadership Center

Appendix E

Table E.1 Unified Actions Matrix Organized by Issue Topic

ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations **
LG -1	Pre, Short	Availability of Temporary Housing/ Long-term sheltering	Vacant Lands Inventory: Locate suitable parcels for the placement of temporary housing units (tents or trailers). Inter-departmental coordination needed to ensure vacant sites have adequate access to infrastructure and will be compatible with adjacent land uses. Utilize selection criteria in Temporary Housing Plan for Catastrophic Events (see Appendix D).	NA	Countywide	Land Use	Conducted annually, prior to storm season.	In-house staffing.
LG -2	Pre, Short	Availability of Temporary Housing/ Long-term sheltering	Housing Stock Analysis: Identify those areas of County with most vulnerable housing stock - likely due to age, poor maintenance, or siting - and assure temporary housing lots are nearest these areas. Also, could require greatest amount of redevelopment attention.	NA	Countywide	Building & Housing	Immediate.	In-house staffing and/or consultant.
LG -3	Pre, Short	Availability of Temporary Housing/ Long-term sheltering	Inform Damage Assessment Teams (DAT) of Temporary Housing and Long-term Shelter Sites: Inform DATs of temporary housing sites with a GIS layer of these sites included on their laptops. Habitability assessments needed in initial phase to determine if previously selected sites can be used.	NA	Unincorp. County and XX Municipalities	Building & Housing	Conducted annually, immediately prior to storm season.	In-house staffing.
LG -4	Pre, Short	Availability of Temporary Housing/ Long-term sheltering	Pre-arranged agreements with hotels to house government employees and aid workers: Secure agreements with nearby hotels to house government employees and the influx of external aid workers deemed essential for sustaining government functions.	NA	Unincorp. County and XX Municipalities	Government Operations	Immediate.	In-house staffing.

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ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations**
LG-5	Pre, Short	Availability of Temporary Housing/ Long-term sheltering	<p>Assistance in finding rental units for temporary housing: The Temporary Housing Plan suggests using vacant apartments and condo units to house displaced citizens (Temporary Housing Plan for Catastrophic Events, 2005). Due to the rapid turn over of rental units and the nature of private property, relying on vacant units will be a logistical problem, which could result in fewer available units than anticipated prior to the event. While utilizing available rental housing should be encouraged, finding these units will be up to individuals. The County could assist by setting up a website that allows land lords/rental agencies with undamaged available units to submit this information. Community Redevelopment Centers could have computers and telephones available for displaced persons to search for housing through this website. Staff could be available to assist.</p>	NA	Countywide	Building & Housing	Immediate.	In-house staffing and/or consultant to set up website.
LG-6	Pre, Short	Availability of Temporary Housing/ Long-term sheltering	<p>Create an On-site Employee Housing Permit: Allow business owners to apply for a special permit to allow on-site employee housing in the event of a disaster. Staff will establish short term code compliance and ensure infrastructure hook ups are present in order to place housing on-site at major employment centers, utilizing parking lots, vacant industrial lands, or campus office centers.</p>	NA	Unincorp. County and XX Municipalities	Building & Housing	Prior to next hurricane season.	In-house staffing.

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ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations**
LG-7	Pre, Short	Availability of Temporary Housing/ Long-term sheltering	Designate Long Term Shelters: The county could designate secondary shelter sites in order to vacate the emergency, school-based shelters for repairs and swift restoration of educational services. Focus on community centers, church facilities, etc.	NA	Countywide	Building & Housing	Immediate.	In-house staffing.
LG-8	Post, Short	Availability of Temporary Housing/ Long-term sheltering	Analysis of Damage Assessment Findings: Determine most severely impacted areas and determine which pre-identified vacant parcels might best serve the residents of the immediate area for temporary housing.	Major & Catastrophic	Unincorp. County and XX Municipalities	Building & Housing	Upon completion of initial damage assessment	In-house staffing.
LG-9	Post, Long	Availability of Temporary Housing/ Long-term sheltering	Subsidize long-term temporary housing: Staff could identify and disburse emergency rental housing assistance funds through the Community Redevelopment Centers for citizens awaiting the restoration of permanent residences. (Predicted as a preferred FEMA approach in future.)	Major & Catastrophic	Unincorp. County and XX Municipalities	Building & Housing, Finance	Disbursal will begin with cessation of gov't provided sheltering. End point dependent on funds.	Financial assistance: FEMA, State, Disaster Recovery Fund Processing: In-house staffing.
LG-10	Pre, Short	Debris Management and Disposal	Create municipal debris management plans: To maximize coordination and effective, rapid clean-up, municipalities should create their own plans OR the municipalities and county should expand the existing debris management plan to be inclusive of all jurisdictions and multiple agencies.	NA	XX Municipalities	Infrastructure	Immediate.	In-house staff from Engineering and SWA coordinate with municipalities.

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LG -11	Pre, Short	Debris Management and Disposal	Secure Pre-event contracts from non-local waste collectors: The County already holds pre-approved contracts (PBC Debris Management Plan, 2005). Those should be assessed to determine that contractors have resources beyond the likely storm impact area, which would allow them to operate immediately. Local contracts could be supplemented with back-up contracts for non-local company in case locals are not operational.	NA	Unincorp. County and XX Municipalities	Infrastructure	Immediate.	In-house staffing.
LG -12	Pre, Short	Debris Management and Disposal	Determine pre-existing conditions at all Debris Collection sites: FL Dept. of Environmental Protection (FDEP) advises soil and groundwater testing be undertaken to establish pre-existing conditions to which the site must be restored prior to official closure.	NA	Unincorp. County and XX Municipalities	Infrastructure	Immediate.	In-house staffing.
LG -13	Pre, Short	Debris Management and Disposal	Annual Reassessment of Debris Collection sites: GIS analysis will show the availability of parcels and any changes in adjacent land use which may have occurred since the site was selected. Follow-up with ground truthing.	NA	Unincorp. County and XX Municipalities	Infrastructure	Conduct Annually.	In-house staffing.
LG -14	Pre, Short	Debris Management and Disposal	Identify Potential Debris Sites in Municipalities: Potential debris sites within municipalities are not included in the current PBC Debris management plan. In preparation for a catastrophic event, municipalities may wish to identify potential sites within their jurisdictions that can be used for debris. These debris sites could be operated by the municipality, or by the SWA pursuant to interlocal agreement, and would speed the clean up and recovery process.	NA	XX Municipalities	Infrastructure	Immediate. Conduct annual reassessment.	In-house staffing.

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ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations **
LG-16	Pre, Short	Debris Management and Disposal	<p>Promote Recycling of Surplus Materials from Reconstruction Activities: Salvaging construction materials from hurricane debris is not practical on a large scale. After a disaster, however, rushed, fragmented repair and rebuilding often results in extra construction materials being tossed in with construction debris while they could be easily salvaged. A substantial private-sector infrastructure exists within the County to recycle this type of waste and a process should be identified pre-disaster to make recycling as easy as tossing for contractors. When reconstruction activities begin, these recycling facilities should be advertised and the use of them highly encouraged.</p>	NA	Unincorp. County and XX Municipalities	Infrastructure	Immediate.	In-house staffing.
LG-17	Pre, Short	Debris Management and Disposal	<p>Create Public Education campaign for the proper segregation of debris: Set the categories and explain the need to separate types of debris.</p>	NA	Countywide	Infrastructure	Immediate.	In-house staffing.

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ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations**
LG-18	Pre, Long	Debris Management and Disposal	<p>Establish housing demolition protocols: Protocols for demolition of destroyed homes for absent property owners should be established so that these unsafe, blighted structures do not remain for too long. Lobbying efforts should focus on making the process of financial reimbursement from FEMA for demolition easier for local governments. Also, the demolition process should include detailed documentation, i.e. photos, of the structures prior to demolition for insurance purposes of the owners if they are not able to return prior to demolition. Once procedures are developed, send information out with property tax statements to inform owners of the demolition protocols and the timeframe involved for them to return or contact the local government about the destroyed structure after a disaster. The property owners should be solicited to provide voluntary contact information such as cell phone number or email address where they could be reached after a disaster in the case of their structure being on the demolition list. This could be added to the current property appraiser database.</p>	NA	Countywide	Infrastructure, Governmental Operations	Immediate.	In-house staffing.
LG-19	Post, Short	Debris Management & Disposal	<p>Coordinate burning with FL Division of Forestry (FDOF): FDOF must be notified of any debris collection sites where burning will occur. Appropriate mitigation efforts will be employed to avoid fires spreading beyond the collection site.</p>	All	Countywide	Infrastructure	Remain in contact for duration of debris processing.	In-house staffing.

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ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations**
LG-20	Pre, Short	Critical Infrastructure & Facility Repair	Maintain current infrastructure designs and electronic back-up files: Staff should <i>continue</i> to analyze the structural integrity of the infrastructure systems (e.g., roads, culverts, bridges) to determine weaknesses and develop improved designs to increase mitigation. New construction designs could be kept on file, with electronic back-ups, for the at-risk system components. By maintaining electronic copies of designs, staff can act faster post-disaster and integrate mitigation into the repair process.	NA	Unincorp. County & XX Municipalities	Infrastructure	Begin as soon as possible.	In-house staffing and/or hire consulting firm.
LG-21	Pre, Short	Critical Infrastructure & Facility Repair	Budget outlays for new designs and reconstruction: Considering the high cost and necessary function infrastructure systems provide, special budget outlays should be established as a contingency fund for post-disaster reconstruction or pre-disaster implementation of new, more advanced designs.	NA	Unincorp. County & XX Municipalities	Infrastructure	Adjust every FY to ensure adequate funding.	In-house staffing + a source of funds for the budget outlays.
LG-15	Pre, Short	Critical Infrastructure & Facility Repair	Prearranged contracts with non-locals for repairs or supplies: Local companies should be used for public facility repairs if they have the capacity to do so after a disaster. However, to make sure that these repairs are made as soon as possible after a disaster, pre-arranged contracts with non-local companies should be made as a back-up.	NA	Unincorp. County & XX Municipalities	Infrastructure	Begin as soon as possible.	In-house staffing.

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ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations**
LG-22	Pre, Short	Fair & Equitable Distribution of Disaster Assistance	Procedures for securing donations and services from the private sector: In the aftermath of a disaster, there may not only be individual donations to groups such as the Red Cross, but private sector groups may wish to donate money or services for particular recovery functions. A procedure for accepting and properly using these donations should be in place. Also, some donations of services could be pre-arranged with the private sector in the event of a disaster.	NA	Countywide	Finance	On-going.	In-house staffing.
LG-23	Pre, Short	Fair & Equitable Distribution of Disaster Assistance	Prioritize Low Income Census Tracts for Recovery Resources: Utilize U.S. Treasury Department Investment Area Criteria to designate census tracts that should have first access to recovery grants and other financial assistance.	NA	Countywide	Economic Development	Prior to next hurricane season.	In-house staffing.
LG-24	Post, Short	Fair & Equitable Distribution of Disaster Assistance	Establish Community Redevelopment Centers: Locate centers throughout all sectors of County, focusing specifically on low-income and most affected areas. Sites will provide guidance on state/federal applications, disburse long-term rental assistance, and provide redevelopment information. Could co-locate with regional one-stop permitting sites in some areas. See Appendix D for greater details.	All	Countywide	Communication & Public Education	Remain open until Temporary Housing needs are processed and redevelopment visioning has been completed.	In-house staffing, plus volunteers and temporary employees needed to staff centers.

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ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations**
LG-25	Post, Short	Fair & Equitable Distribution of Disaster Assistance	Provide multi-lingual assistance to communities throughout the county: Numerous communities in Palm Beach County have high percentages of non-English speakers, namely of Spanish and Haitian Creole. Staff handling public participation in redevelopment efforts should be multi-lingual or interpreters could be provided.	All	Countywide	Health & Human Services	Whenever disaster assistance is provided in these communities.	Volunteers or outside assistance.
LG-40	Pre, Short	Sustaining Essential Governmental Services	Create countywide clearinghouse for PDRP-related documentation: To ensure access, especially after a disaster, to needed documents by all working to implement PDRP actions, create a countywide clearinghouse of all materials relevant to implementation of the PDRP, as well as backup procedures. These materials include, but are not limited to, plans cited herein, all mutual aid agreements for post disaster assistance, and approved, pre-arranged contracts for post-disaster work. Documents should be available in hardcopy at the EOC library and in electronic format preferably accessible through a secure website.	NA	Countywide	Administration	Prior to next hurricane season.	In-house staffing.
LG-26	Pre, Short	Sustaining Essential Governmental Services	Model Damage for Different Storm Scenarios: Using local GIS data, HAZUS and Solid Waste Authority modeling capabilities, produce countywide estimated damage scenarios based on the level of disaster. These can be used in both planning and training for post-disaster redevelopment.	NA	Countywide	Government Operations	Prior to next hurricane season.	In-house staffing and/or consultant.

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ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations**
LG-27	Pre, Short	Sustaining Essential Governmental Services	Perform Mock-Disaster Finance Exercise: Using realistic damage estimates for a Category 4 or 5 hurricane, conduct an exercise that includes finance staff and decision makers in determining how to proceed with essential services with inevitable depletion of revenues.	NA	Unincorp. County and XX Municipalities	Government Operations	Prior to next hurricane season.	In-house staffing, possibly hire consultant to conduct.
LG-28	Pre, Short	Sustaining Essential Governmental Services	Prioritize Essential Services: Creating a prioritized list of those services that citizens need immediately (i.e., law enforcement, public works, housing) can help speed the decision making process for post-disaster funding and reconstruction.	NA	Unincorp. County and XX Municipalities	Government Operations	Immediate.	In-house staffing.
LG-29	Pre, Short	Sustaining Essential Governmental Services	Maintain Mutual Aid Agreements statewide: The agreements can help sustain services when many local staff and employees may find themselves victims of the disaster event. Establishing agreements statewide prepares the county for large disasters which will also adversely affect neighboring jurisdictions such as Broward and Martin Counties.	NA	Unincorp. County and XX Municipalities	Government Operations	On-going.	In-house staffing.
LG-30	Pre, Short	Sustaining Essential Governmental Services	Maintain a list of possible funding sources for disaster recovery and redevelopment: Funding sources are included in this plan (Appendix D), however, new ones may arise and some may disappear. Current changes being made to FEMA and pilot programs being tested in Mississippi and Louisiana right now are examples of changes that could come to post-disaster funding opportunities. Annual updating of the funding list is essential.	NA	Countywide	Finance	On-going.	In-house staffing.

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ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations**
LG-31	Pre, Short	Sustaining Essential Governmental Services	Establish protocols for County operational assistance to municipal jurisdictions: In the event that municipalities are overwhelmed and require operational assistance, agreements with the County should clearly state the parameters of authority and control for particular services provided.	NA	Unincorp. County and XX Municipalities	Government Operations	Immediate.	In-house staffing.
LG-32	Pre, Short	Avoiding Erosion of Local Control	Establish a Disaster Recovery Fund: By creating recovery funding mechanisms (e.g., savings funds, stand-by line of credit) available for post-disaster recovery and redevelopment actions, local jurisdictions can exercise greater control over decision making and have the ability to set programs and actions in motion without having to wait for State or Federal assistance.	NA	Unincorp. County & XX Municipalities	Finance	Account for general contingency fund in annual FY. And, work with banking community for credit line.	Portion of budget set aside as savings.
LG-33	Post, Short	Avoiding Erosion of Local Control	Maintain and Implement the PDRP: The PDRP provides direction in the post-disaster period and can exhibit that local authorities have priorities. During implementation, the County can invite State and Federal officials to sit in on committee or working groups' meetings.	All	Countywide	Administration	On-going.	In-house staffing.
LG-34	Pre, Short	Municipal Insolvency following a disaster	Establish procedures for municipalities receiving financial assistance from the County: In the event that municipalities are overwhelmed by disaster and lose the financial foundation to remain stable in the short term, assistance agreements with the County should clearly state services provided, proper authority and control, and procedures for restoring stability to the municipality.	NA	Unincorp. County and XX Municipalities	Government Operations	Immediate.	In-house staffing.

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ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations**
LG-35	Pre, Short	Municipal Insolvency following a disaster	Assist municipalities in developing Continuity of Operations Plans (COOPs) and coordinate with county COOPs: Not all municipalities currently have COOPs which could assist in planning for a situation which could lead to insolvency. Having coordination between the many municipalities' COOPs and the many county departments' COOPs could help establish procedures for dealing with possible municipality problems in providing services.	NA	Unincorp. County and XX Municipalities	Government Operations	As soon as possible.	In-house staffing and consulting services needed.
LG-36	Pre, Short	Municipal Insolvency following a disaster	Information Sharing between Municipalities and County: When entering into assistance agreements, providing access to information regarding administration practices, contracts, and GIS files can facilitate a more efficient response on the part of the county staff. A GIS Countywide Clearinghouse could be created that provides back-up of this critical data and access by all involved in disaster recovery.	NA	Unincorp. County and XX Municipalities	Government Operations	Immediate.	In-house staffing.
LG-37	Pre, Short	Use of Local Business Capabilities in Disaster Recovery	Create a Public-Private Partnership Network to supplement government recovery/redevelopment activities: Certain services can not be fulfilled by the government post-disaster. Establishing a partnership framework that utilizes the capabilities of private businesses to fill the particular voids can be beneficial to citizens.	NA	Countywide	Administration	Prior to next hurricane season.	In-house staffing.

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LG-38	Pre, Short	Use of Local Business Capabilities in Disaster Recovery	Include local businesses in pre-arranged contracts for recovery and redevelopment: While it would not be wise to rely entirely on local capabilities in a post-disaster situation, contract bids could be scored higher that have plans to sub-contract with local businesses if they are operational. The local governments could also arrange for services from local companies but have back-up agreements with outside companies (e.g., unaffected areas of FL, out-of-state) in the event that the locals are unable to operate.	NA	Unincorp. County and XX Municipalities	Administration	Prior to next hurricane season.	In-house staffing.
LG-39	Post, Short	Use of Local Business Capabilities in Disaster Recovery	Organize a post-disaster potential subcontractors meeting: Through the Public- Private Network, arrange and advertise for a meeting of local business who are ready to offer services in recovery projects and representatives from the companies who hold recovery contracts and are looking for subcontractors.	All	Countywide	Administration	Within 2-3 weeks after disaster.	In-house staffing.
EP-2	Pre, Short	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Locate possible sites for post-disaster temporary office space: On an annual basis prior to hurricane season, locate buildings/spaces that could be at least partially used for temporary space for businesses in need after a disaster, e.g., hotel meeting space or portions of community centers. Set up pre-arranged agreements for use of the spaces. Also, locate properties, near business districts, that mobile units could be placed on for temporary office space.	NA	Countywide	Economic Development	Prior to next hurricane season.	In-house staffing.

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ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations**
EP-22	Pre, Short	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Make arrangements to secure mobile units/trailers for temporary office space: To provide more temporary office space than can be secured in undamaged buildings, mobile units should also be provided. Pre-arranged agreements to deliver these mobile units after a disaster should be made. The Small Business Administration (SBA) should be approached to see if they would create a program to provide these just as FEMA provides temporary housing trailers.	NA	Countywide	Economic Development	Prior to next hurricane season.	Grants/assistance from SBA or work to get a sponsoring company to help with costs; Disaster Recovery Fund.
EP-23	Pre, Short	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Establish criteria for placing small businesses in temporary office sites: To ensure those businesses most in need of operating space are placed in the limited amount of temporary sites, scoring criteria and an application need to be created for use after the disaster. Example criteria: damage to office space prevents any safe use, financial need, ability of business to be productive during recovery period (i.e. no/limited loss of customer base due to disaster).	NA	Countywide	Economic Development	Prior to next hurricane season.	In-house staffing.
EP-3	Pre, Short	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Locate possible sites for Business Recovery Centers: Using GIS, determine areas of high office concentration and search for facilities that could be used temporarily after a disaster for Business Recovery Centers (i.e., Workforce Alliance or chamber buildings). Secure pre-disaster agreements for a facility in each area and an alternate in case of damage or access problems.	NA	Countywide	Economic Development	Prior to next hurricane season.	In-house staffing.

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EP-4	Pre, Short	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Secure supplies for temporary offices and business recovery centers: Work with office supply and electronics companies to secure agreements for donations such as desks, chairs, computers, etc. to supply temporary office spaces and business recovery centers in the event of a disaster. Create a list and estimated amount of supplies that may be needed.	NA	Countywide	Economic Development	Prior to next hurricane season.	In-house staffing.
EP-5	Pre, Short	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	Coordinate with Workforce Alliance to co-locate services with Business Recovery Centers: Assisting employers in the search for employees can facilitate recovery. Co-locating the two entities can assist both parties. Coordinate with Workforce Alliance, which has offices in each region of the county.	NA	Countywide	Economic Development	Establish partnership prior to event, and keep operational with the Business Recovery Centers.	In-house staffing.

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EP-24	Pre, Short	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	<p>Encourage local physicians to create a coalition/network focusing on post-disaster recovery or enter into mutual aid agreements: Doctor offices are an important part of the small business community. Due to specialized equipment and office needs, offering temporary office space is not a very practical option. Instead forming a network or coalition may be helpful so that they can assist each other through sharing offices and equipment until repairs can be made. In addition, for doctors and nurses who cannot work out of their facilities, a network could assist in temporarily placing them with clinics and other doctor offices that need extra staff to deal with increased needs after a disaster.</p>	NA	Countywide	Health & Human Services	Prior to next hurricane season.	In-house staffing.
EP-1	Pre, Long	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	<p>Assist small business with continuity planning and mutual aid agreements: Through the Private-Public Network and other business organizations as well as at the time of applying for an occupational license, make available templates and other information about how to create a business continuity plan for small businesses. Also, introduce the idea in the business community of mutual aid agreements between businesses. Provide continuity training sessions and presentations at chamber meetings or as special workshops in addition to website and print materials.</p>	NA	Countywide	Economic Development	Immediate.	In-house staffing. Grants for temporary positions to educate business community.

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EP-6	Post, Short	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	<p>Establish Business Recovery Centers: This is the business equivalent of the Community Redevelopment Centers. These centers should be located in hard-hit business districts throughout the county and offer services such as assistance with applying for disaster assistance/loans, applications for bridge loans, and information about government-supplied temporary office space and where to look for space to rent. The centers should also offer basic office and communications equipment that can be used for short amounts of time, such as phone, fax, copy machine, and computers with internet access. A message board area could also be available at the center so that businesses can post items they have available to assist others or they can post things they are in need of.</p>	Major & Catastrophic	Countywide	Economic Development	Establish as soon as possible after the disaster and remain open until communications are fully operational and offices in area are under repair or businesses have found temporary relocations.	In-house staffing or volunteers could be used. Some items could be donated. Any other costs could come from the Disaster Recovery Fund or outside assistance.
EP-7	Post, Short	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	<p>Establish Temporary Office Sites: Starting with the pre-arranged sites and adding other undamaged vacant warehouse and office/retail building sites available after the storm if needed. Businesses must apply at a Business Recovery Center for use of a temp. office. Priority given to small and minority businesses with greatest financial need. Placement should be as close to original business location as possible. Child care facilities should be co-located, at least with the larger sites.</p>	Major & Catastrophic	Countywide	Economic Development	Establish as soon as possible after the disaster and remain open until the housed businesses have received financial assistance or have finished repairs to their offices.	In-house staffing to make arrangements. Some sites may not be donated and will require money for leasing. The Disaster Recovery Fund and/or outside assistance could be used.

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EP-8	Post, Short	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	<p>Provide wireless internet access hubs throughout the community: A major problem for businesses after a disaster is lack of communications. Providing wireless hubs free of charge in public areas near business districts and office parks would allow many who have laptops and PDAs, or are close to the hub to have some access, to at least partially return to business. Pre-arranged agreements with wireless internet providers to allow temporary free access to their services for impacted businesses might be an option. Also, preparation for such a service should be done in coordination with the commission currently working on establishing countywide wireless infrastructure.</p>	Major & Catastrophic	Countywide	Economic Development	Establish as soon as possible after the disaster and remain free/available until communications are fully operational.	Donations from private sector or Disaster Recovery Fund.
EP-29	Post, Short	Ability of Small Business to Stay Afloat until Adequate Financial Assistance is Available	<p>Provide short-term children's activities until regular school and child-care facilities are available: Cities and community organizations who have children's activities such as summer camp or sports programs should provide special sessions of these after a disaster to give parents a safe option for their children during the day until schools reopen or after school so they can return to work. The County School Board is also working on providing these services in undamaged schools.</p>	Major & Catastrophic	Countywide	Health & Human Services	Establish as soon as possible after the disaster and remain available until typical child care facilities and after-school activities have resumed.	Private donations, volunteers, and/or Disaster Recovery Fund.

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ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations**
EP-9	Post, Long	Avoiding Permanent Relocations of Core Businesses Outside of the Community	Create Business Improvement Districts (BID) in downtown and retail centers: BIDs can provide a way for businesses to pool resources to encourage people to return to these areas to shop, eat, etc. With cuts to local government resources, repairing the appearance of these areas to attract customers may be a low priority.	All	Countywide	Economic Development	Soon after the disaster.	In-house staffing to assist in creating BIDs.
EP-10	Post, Long	Avoiding Permanent Relocations of Core Businesses Outside of the Community	Advertise the quick recovery and resumption of business to the nation: Once it is safe for people to return and businesses reopen, especially retail/restaurants, make sure the nation is aware of the recovery to avoid stagnation of the local economy and invite returning seasonal residents. If a major disaster strikes, the news coverage of the devastation will remain in many peoples' minds and slow investment in the area unless counteracted with positive images of recovery.	Major & Catastrophic	Countywide	Economic Development	Depending on the level of disaster but after enough time has elapsed for businesses to have reopened.	In-house staffing to produce press releases and work with reporters. Possibly produce and run commercials with State assistance.
EP-11	Post, Long	Avoiding Permanent Relocations of Core Businesses Outside of the Community	Produce statistics for post-disaster economic environment for better marketing business opportunities and discovering needs: The demographics and economic environment is likely to have dramatic changes after a disaster. For businesses to access the market and the workforce capabilities they will need new population and economic statistics. The County can assist by having a post-disaster report done and distributing to the business community.	Major & Catastrophic	Countywide	Economic Development	Depending on the level of disaster but after enough time has elapsed for some of the population to have returned.	Would most likely be done through a consultant. Grants or state money may be available but may not want to wait for these.

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EP-12	Post, Long	Avoiding Permanent Relocations of Core Businesses Outside of the Community	Hold an Economic Development Charette for the business community after a disaster: Due to unforeseen changes from a disaster, the current economic development plans may need updating to reflect changed conditions. To do this, a charette could be held to solicit creative solutions to rebuilding the economy - industry, tourism, medical, retail, and research and development.	Major & Catastrophic	Countywide	Economic Development	Depending on the level of disaster but after enough time has elapsed for some of the population to have returned.	In-house staffing and facilitation services.
EP-13	Post, Long	Avoiding Permanent Relocations of Core Businesses Outside of the Community	Beautification/landscaping for tourism: Landscaping and other physical attributes, which add to a sense of place and attract tourist and seasonal residents, needs to be replaced. While not an immediate need, these little touches should not be forgotten if the County also is working on repopulation.	All	Countywide	Economic Development	Within a year after the disaster.	Local volunteer groups and grants such as Urban Forestry Grant.
EP-14	Post, Long	Avoiding Permanent Relocations of Core Businesses Outside of the Community	Adjusting Incentive Packages: Businesses that received incentive packages as a means to lure economic development to the county could be granted a waiver on measurable objectives they must achieve before collecting the full package. Previously decided upon criteria could become a disincentive for the business to remain and redevelop. The waiver could provide more time to achieve the objectives or reduce the objective while maintaining the same timeframe.	Major & Catastrophic	Countywide	Economic Development	Analyze need for such a program within a few months after the disaster.	In-house staffing.

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EP-25	Post, Long	Avoiding Permanent Relocations of Core Businesses Outside of the Community	<p>Develop special post-disaster incentive packages to entice business to remain in Palm Beach County: The County can utilize current programs or develop new programs to provide incentive packages to businesses to redevelop and restore operations, rather than relocate to unaffected areas.</p>	Major & Catastrophic	Countywide	Economic Development	Analyze need for such a program within a few months after the disaster.	In-house staffing.
EP-15	Pre, Short	Shortage of Contractors /Supplies Slows Repairing of Homes and Businesses	<p>Encourage Contractors and Citizens to maintain pre-arranged agreements for hurricane repairs: Finding a contractor after even a small storm is not easy and often results in damage going unrepaired for months or more. By making arrangements with qualified contractors before a storm for them to repair any damage, it allows for quicker repairs and for the contractor to already be aware of what supplies they may need so they can pre-stock to some degree.</p>	NA	Countywide	Building and Housing	On-going.	Include in next season's public education materials for hurricane preparation and costs will be minimal.
EP-26	Pre, Short	Shortage of Contractors /Supplies Slows Repairing of Homes and Businesses	<p>Provide staging areas for contractors and repair crews: Work crews of various trades consume open parking lots as their staging areas, preventing the entities using those sites from returning to normal operations. Defining regional locations that can be used as staging areas will coordinate recovery and redevelopment logistics.</p>	NA	Countywide	Building and Housing, Land Use	Locate sites prior to hurricane season. Review annually.	In-house staffing.

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EP-27	Pre, Short	Shortage of Contractors /Supplies Slows Repairing of Homes and Businesses	Stockpile temporary repair and/or construction materials needed for immediate repairs to public facilities: A small warehouse and stockpile of materials needed for cleanup and quick repairs to public facilities such as schools and government offices should be obtained so that a delay in supplies does not hinder resumption of public services. If excess supplies are available after public repairs have been made these can be opened for sale for private use.	All	Unincorp. County and XX Municipalities	Infrastructure	Procure prior to next hurricane season and restock annually as needed.	Disaster Recovery Fund.
EP-16	Post, Short	Shortage of Contractors /Supplies Slows Repairing of Homes and Businesses	Develop incentives for large construction firms to take part in the repair and reconstruction process: A "repair to permit" ratio could be developed to allow a firm to make disaster-related repairs on a certain number of private structures in exchange for receiving fast-tracked permit processing on a certain number of new structures once the temporary permit suspension ceases. The ratio should be set at such a scale that a significant number of repairs are completed. However, if the ratio is too large (approaching 1:1) then the repair/reconstruction needs for which the program was initiated will quickly be abandoned in favor of returning to new construction in-progress prior to the disaster event..	All	Unincorp. County and XX Municipalities	Building and Housing	Announce intention and provide criteria prior to storm.	In-house staffing.

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EP-17	Pre, Short	Rapid Restoration of Power & Private Utilities	Improve interconnections between utility providers: Isolated failures in utility infrastructure can place extreme burden on certain citizens. Improved interconnections will alleviate those isolated failures by providing service from adjacent systems. Improvements can include larger capacity lines that can provide full service quickly and valves controlled remotely that will function from afar without personnel.	NA	Countywide	Infrastructure	Begin as soon as possible.	Seek state assistance through programs such as HMGP.
EP-18	Pre, Short	Rapid Restoration of Power & Private Utilities	Include multiple utility representatives on the Infrastructure Working Group: With FPL, Adelphia, multiple municipal water utilities, and PBC water and wastewater services, this issue is a complex network of players that must be coordinated to achieve a swift and efficient restoration of power and other utility services.	NA	Countywide	Infrastructure	Immediate.	No cost.
EP-19	Post, Long	Rapid Restoration of Power & Private Utilities	Build in Mitigation during reconstruction of utilities: Underground utilities have a high up-front cost but will ultimately lower expenditures and assist in a more rapid restoration of power after disasters. Other mitigation efforts can focus on hardened, stronger designs for the infrastructure, such as stormwater, water, and wastewater facilities and systems.	All	Countywide	Infrastructure	Implement after DAT findings are analyzed.	Private utilities assume costs but could be assisted or loaned funds through the Disaster Recovery Fund.

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EP-28	Pre, Short	Agricultural Losses or Lake Okeecho-bee Dike breach	<p>Continue utilization of community-based structure (e.g. CERTs) in the Glades area to facilitate hazard recovery/redevelopment and information dissemination: Given the current concerns over immigration, government officials may not be welcome in many areas of the County. The CERT structure should be established to address CEMP-related issues. (e.g., ESOL teachers could work within the community to identify individuals that could take a leadership role.) This structure should also be used to spread recovery and redevelopment information to the immigrant population.</p>	NA	Unincorp. County and XX Municipalities	Communication and Public Education	Prior to hurricane system.	In-house staffing. Volunteers within the schools.
EP-20	Post, Short	Agricultural Losses or Lake Okeecho-bee Dike breach	<p>Provide bridge loans and/or property tax deferrals to small farmers: The small farmer is endangered in Florida and, after severe damages, may see no choice financially than to sell the land for development. By offering quick financial assistance through bridge loans until the US Department of Agriculture can assist, and by allowing for deferrals or waiving a certain amount of property tax, the County could encourage these lands to remain working farms.</p>	All	Unincorp. County	Finance	As soon as possible after disaster.	Agreements with banks and backing for the loans. Further cut in tax revenues but not an immediate loss.
EP-21	Post, Short	Agricultural Losses or Lake Okeecho-bee Dike breach	<p>Coordinate with Red Cross, faith-based groups, and other NGOs for assistance in the Glades communities: Due to the higher percentage of immigrant agricultural workers in the area and the current concern surrounding immigration, non-governmental assistance may be better received than from government officials.</p>	All	Countywide	Health & Human Services	As soon as possible after disaster.	Volunteers.

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SE-1	Pre, Short	Reducing Incidence of Fraudulent & Unethical Practices	Create Public Education campaign to inform citizens of services offered by the county: Many incidents of fraud and deception occur when individuals are not aware of proper procedures or legal protections. The county could educate its citizens thoroughly about the services that will be provided and proper procedures to follow in an attempt to prevent such fraudulent acts.	NA	Countywide	Communication and Public Education	Prior to next hurricane season.	In-house staffing; include in next season's hurricane education materials.
SE-2	Pre, Short	Reducing Incidence of Fraudulent & Unethical Practices	Provide Personal Finance Consultation Services at Community Redevelopment Centers: Secure pre-arranged agreements with firms to provide expert volunteers to counsel individuals and small business owners on their financial options after the disaster. Lack of knowledge or assistance often forces people into selling their property in a rush for much less than its worth or falling prey to predatory lenders.	NA	Countywide	Communication and Public Education	Immediate.	None if firms donate staff time.
SE-24	Pre, Short	Reducing Incidence of Fraudulent & Unethical Practices	Educate the public on risks of using unlicensed contractors: Hurricane preparation education prior to storms should include information on why unlicensed contractors should not be used and how to check the credentials of a contractor. This information can also be made available at the Community Redevelopment Centers after a hurricane.	NA	Countywide	Communication and Public Education	Immediate.	In-house staffing; include in next season's hurricane education materials.

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SE-4	Pre, Long	Reducing Incidence of Fraudulent & Unethical Practices	Preventing Predatory Real Estate investment and 'house flipping': Investigate creative options to decrease the financial burden on low-income homeowners attempting to reestablish themselves in the county. Could take the form of reducing or waiving property taxes, or working with local banks and lending institutions to deter, reduce, or waive mortgages for a certain amount of time after a disaster impacts the county.	NA	Countywide	Finance	Immediate.	In-house staffing and coordination with local lending/ banking institutions.
SE-5	Pre, Short	Reducing Incidence of Fraudulent & Unethical Practices	Establish a countywide liaison with the State Attorney General fraud task force: This individual will act as Palm Beach County's liaison with the State Attorney General and Department of Consumer Affairs. Work should focus on pre-disaster education campaigns and informing the public of scams regarding home repairs, charity/donations, price gouging, ID theft, and insurance payments, among others. Also, the liaison could work with the media to keep citizens informed of recent fraudulent trends.	All	Countywide	Communication and Public Education	Immediately seek to create the group. Can go into investigative action soon after recovery begins.	In-house staffing and possibly temporary employees.

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SE-3	Pre, Short	Individual's Role in Preparing for & Recovering from a Disaster	<p>Create an education campaign for increased self reliance after a disaster: Encourage residents and businesses to start disaster savings (future possibility of Congress making tax-free disaster savings accounts) for their insurance deductibles, temporary housing needs, and other costs. Also stress need to acquire property or rental insurance that covers appropriate hurricane damages. These longer-term preparedness issues can be included with education on family evacuation plans, longer food and water supplies, and keeping personal medical/prescription records.</p>	NA	Countywide	Communication and Public Education	Immediate.	Partner with media outlets and financial service firms.
SE-25	Pre, Short	Adequate Health and Mental Health Services Available During Recovery	<p>Assess capabilities of hospital system and medical transport services to cope with non-operational hospitals: Due to the vulnerable location of some hospitals in Palm Beach County there is the possibility of in a major disaster certain hospitals may not be operational not just during immediate response but for a longer-term. The ability of the other hospitals to deal with increased demand in this case should be assessed including their financial capabilities to deal with increased uninsured patients. Also the need for mutual aid agreements to borrow helicopters or other transport services to deal with increased distances to operational emergency rooms should be assessed. A mock-disaster training session including detailed risk assessments for the hospital system could be a useful tool.</p>	NA	Countywide	Health & Human Services	Begin assessment prior to next hurricane season.	In-house staffing.

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SE-26	Pre, Long	Adequate Health and Mental Health Services Available During Recovery	Lobby the State to establish an online database of medical records and recent prescriptions: A dispersed population, new medical personnel, and fragmented filing are encumbrances to efficient post-disaster medical care. An integrated electronic database of records, prescriptions, allergies, etc. will allow physicians to access records from afar or for patients with whom they have no prior experience. Louisiana and other states have done this after the problems they encountered with Katrina. There are many privacy issues that would need to be addressed, however.	NA	Countywide	Health & Human Services	Coordinate with AMA and local medical community and suggest prior to next hurricane season.	In-house staffing.
SE-27	Pre, Long	Adequate Health and Mental Health Services Available During Recovery	Encourage Employee Assistance Programs to address post-disaster mental health: Employers (including local governments) can provide free and confidential counseling through an employee assistance program to assist with post-disaster stress. Also employees can be educated to be sensitive of signs of possible post-disaster stress in their co-workers.	NA	Countywide	Health & Human Services	Immediate.	In-house staffing and outreach through private-public partnership and other business organizations.
SE-6	Post, Short	Adequate Health and Mental Health Services Available During Recovery	Coordinate with the American Psychological Association's (APA) Disaster Outreach Program and SAMHSA Projects Hope & Recovery: Mental health needs after a major disaster will likely be more than a damaged local health care system can attend to. Working with volunteer groups such as APA and Red Cross to distribute mental health assistance throughout the community in coordination with other disaster assistance will better serve the County's residents.	Major & Catastrophic	Countywide	Health & Human Services	As soon as possible after disaster.	Volunteers.

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SE-28	Post, Short	Adequate Health and Mental Health Services Available During Recovery	Provide a mobile health unit: Focusing on hard-hit and low-income neighborhoods, provide counseling and health screening and referral services through a mobile unit that rotates its location throughout the community until clinics and other medical services are reopened.	Major & Catastrophic	Countywide	Health & Human Services	As soon as possible after disaster.	Volunteers to staff. Mobile unit could be arranged through large non-profit such as Red Cross or grants from health foundations.
SE-7	Post, Long	Restoring Educational, Cultural, and Historic Amenities	Assisting Educational and Cultural Facilities find funding for repairs and restoration: After the disaster, local governments should designate staff to assist in finding grants and other assistance for these facilities.	All	Unincorp. County and XX Municipalities	Economic Development	After immediate response activities have been completed.	In-house staffing.
SE-8	Post, Long	Restoring Educational, Cultural, and Historic Amenities	Tax breaks for Historic Structure Restoration: Providing property tax breaks for proper restoration of historic structures damaged by the disaster.	All	Unincorp. County and XX Municipalities	Finance	Prior to property taxes coming due.	Will be a slight decrease in revenues.
SE-9	Pre, Long	Coastal and Aquatic Restoration	Ensure FDEP files/permits are up to date: FDEP must have approved beach/dune design templates on file to expedite post-disaster nourishment project approval. Inspections are also necessary for upland sand sources.	NA	Countywide	Environment	Annual.	In-house staffing.
SE-10	Pre, Long	Coastal and Aquatic Restoration	Revise beach/dune templates as necessary: FDEP approves the design templates for approx. 5 years, but this period can be shortened when severe erosion is experienced.	NA	Countywide	Environment	3-5 year cycles depending on erosion rates.	In-house staffing.

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SE-11	Post, Long	Coastal and Aquatic Restoration	Coordinate with FDEP & USACE to conduct erosion assessment: This is the first step in securing approval and funding to undertake nourishment projects.	All	Countywide	Environment	Immediately following the storm event.	In-house staffing.
SE-12	Post, Long	Coastal and Aquatic Restoration	Reassess CCCL: In a catastrophic, 100-year storm event, the erosion will be so great to warrant reassessing and possibly moving the demarcation landward.	Catastrophic	Countywide	Environment	Begin following the FDEP erosion assessment	In-house staffing and surveying costs.
SE-13	Post, Short	Coastal and Aquatic Restoration	Assess damage to coastal wetland/mangrove habitats: Access and document damages to these areas. Inform property owners of need to restore coastal wetland vegetation for hazard mitigation as there may be some property owners who will try to develop damaged areas. Apply for grants to restore these areas.	All	Countywide	Environment	After immediate response activities have been completed.	In-house staffing or consulting costs + aerial photography which may be used for other post-disaster actions.
SE-14	Post, Long	Coastal and Aquatic Restoration	Assess and restore damaged coral reefs: Using volunteers from local scuba dive organizations survey possible damage to local coral reefs. Where severe damage has been found secure grants to restore reefs as these are a major tourism draw and are already highly threatened.	All	Countywide	Environment	After immediate response activities have been completed.	Volunteers for initial survey and contract for restoration work. Grants through national organizations may be available.
SE-15	Post, Long	Coastal and Aquatic Restoration	Marine debris clean up: Hurricane debris finds its way into the intracoastal waterway, ocean, and connected waterbodies. Clearing large or toxic debris is necessary for public safety as well as environmental protection. Coordination with the Coast Guard, USACE, and Lagoon Keepers is recommended.	All	Countywide	Environment	After immediate response activities have been completed.	Grants are available through NOAA and other organizations.

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SE-16	Pre, Short	Water Pollution from Sewer System Failures	Create Surface water clean up procedures: Surface waters, including streams, canals, rivers, lakes, and the ocean, can all be contaminated by sewer system failures. Contingency plans for quick clean up should be in place to prevent or slow widespread contamination. It is a two-part clean up, including solids and bacterial particles.	NA	Unincorp. County and XX Municipalities	Environment	As soon as possible.	Staff time in coordination with the SFWMD and USACE.
SE-17	Pre, Short	Increased Fuel for Wildfires on Conservation Lands	Identify properties with potential for wildfire risk if there is a hurricane: Using conservation lands and Property Appraiser GIS shape files create a list of property owners and contact information within 1,000 ft. of wooded, conservation tracts. The list will be used to raise awareness about increased risk of wildfire due to hurricane debris during the recovery period after a hurricane.	NA	Countywide	Environment	List should be prepared annually prior to hurricane season.	Minimal staff time will be required to use GIS to prepare the list.
SE-18	Pre, Long	Increased Fuel for Wildfires on Conservation Lands	Promote Management Plans for Conservation Areas with emphasis on dealing with hurricane debris: Amend County Parks management plans to include strategies for dealing with increased wildfire fuel from hurricane debris. Require through comprehensive plan policy that conservation easements include language for fuel maintenance, particularly after a hurricane. Coordinate with state-owned conservation areas to ensure management plans address hurricane debris.	NA	Unincorp. County and XX Municipalities	Environment	Adoption or amendment of management plans and inclusion of comp plan policies should occur ASAP. This is not a recurring action.	In-house staffing.

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SE-19	Post, Short	Increased Fuel for Wildfires on Conservation Lands	Conservation Areas Damage Assessment: Assess amount of hurricane debris in conservation areas and the associated wildfire risk.	All	Unincorp. County and XX Municipalities	Environment	After immediate response activities and built environment damage assessments have been completed.	In-house staffing, possibly aerial assessments or photography.
SE-20	Post, Short	Increased Fuel for Wildfires on Conservation Lands	Accelerated Fuel Reduction Strategy: Through coordination with FDOF and land managers, develop a prioritized fuel reduction schedule for impacted conservation areas. Mechanical removal and prescribed burns should be employed to decrease risk of wildfire with more populated areas receiving first priority. Temporary fuel breaks can be considered for areas that can not receive attention prior to the beginning of fire season.	Major or Catastrophic; possibly needed if multiple Minor events in a season	Unincorp. County and XX Municipalities	Environment	After conservation areas damage assessment ; implementation of strategy ideally before start of fire season in Feb.	Federal emergency funds often available through USDA Forest Service and State funds through FDOF. Ideally, managing entities of conservation areas could budget for such activities avoid waiting for grant funding. Mutual aid might be possible to increase number of certified burning and other needed professionals and equipment.

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SE-21	Post, Short	Increased Fuel for Wildfires on Conservation Lands	Post-Hurricane Wildfire Education Initiative: Using the list of potential at-risk property owners, mail FDOF brochure of hurricane debris wildfire risk. In coordination with FDOF, present to homeowner groups what they can do to reduce their vulnerability during the increased risk period while hurricane debris is still in conservation areas near them.	Major or Catastrophic; possibly needed if multiple Minor events in a season	Unincorp. County and XX Municipalities	Environment	After conservation areas damage assessment and before start of fire season in Feb.	In-house staffing, mailing costs.
SE-22	Pre, Short	Unhealthy Levels of Mold in Damaged Structures	Educate the public of the health risks of mold: Include educational information in hurricane preparation materials and through the media about identifying mold problems, avoiding structures with large concentrations of mold, and hiring mold remediators. Special-needs individuals who are more susceptible (i.e. home oxygen users) should receive high priority in education efforts. Creative methods for reaching these groups should be developed (such as vendors of oxygen equipment).	NA	Countywide	Health & Human Services	As soon as possible.	In-house staffing; can be added to existing hurricane education materials.
SE-23	Post, Short	Unhealthy Levels of Mold in Damaged Structures	Provide information and oversight of mold infestation: Through the Community Redevelopment Centers and the media educate the public of the health risks of mold. Provide a hotline that can be called for renters and employees who feel their concerns over mold in their home or workplace is not being adequately addressed. Health officials can provide courtesy checks of these structures and follow-up to see that remediation of the problem is conducted.	Major & Catastrophic	Countywide	Health & Human Services	As soon as possible after disaster.	In-house staffing, volunteer time.

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RM-1	Pre, Long	Ability to Rebuild Stronger Structures	Amend Homeowner & Neighborhood Association covenants: Restrictive covenants often preclude the introduction of valuable hazard mitigation measures. The covenants can be amended to improve disaster resiliency. This can be done voluntarily through public education or, in newly proposed areas, require all new covenants to address mitigation.	NA	Unincorp. County and XX Municipalities	Land Use	Immediate. Begin education and attempts to amend.	In-house staffing; education outreach costs.
RM-2	Pre, Long	Ability to Rebuild Stronger Structures	Bring Structures into Compliance with current building codes: Structures that exceed the 50% threshold for substantial damage shall be required to come into compliance with the current regulations of the Florida building code. Lowering the threshold for substantial damage to 45% or 40% could increase future resiliency and improve insurance rate premiums.	NA	Unincorp. County and XX Municipalities	Building & Housing	Immediate.	In-house staffing.
RM-3	Pre, Long	Ability to Rebuild Stronger Structures	Increase skilled construction workforce: In order to meet the demand for reconstruction, coordinate with local community college or vocational schools to offer construction and trades classes. Include accreditation courses on the FL Building Code, which could be conducted by the Building Code Education & Outreach Council.	Major & Catastrophic	Unincorp. County and XX Municipalities	Building & Housing	Create framework for quick post-disaster implementation.	Seek state assistance.
RM-4	Pre, Long	Ability to Rebuild Stronger Structures	Increase Wind Load Velocity regulations: Pursue legislation to introduce more stringent wind load velocity (156 mph) regulations for Palm Beach County in the Florida Building Code.	NA	Countywide	Building & Housing	Immediate.	In-house staffing, lobbying costs.

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RM-5	Pre, Long	Ability to Rebuild Stronger Structures	Expand V-Zone regulations to A-Zones: Stringent flood prevention regulations directed toward V-Zones should be expanded to structures found in A-Zones. Structures could come into compliance voluntarily or once hazard related damages exceed the 50% threshold. A-Zones often experience similar flood, surge, and wind hazards but do not currently meet most protective development standards.	NA	Unincorp. County and XX Municipalities	Building & Housing	Immediate.	In-house staffing.
RM-6	Pre, Long	Ability to Rebuild Stronger Structures	Public education to promote hardening and mitigation: Conduct workshops or public education campaigns to encourage citizens to build structures that exceed the Florida Building Code and include hardening and mitigation advances.	NA	Unincorp. County and XX Municipalities	Communication & Public Education	Immediate.	Add to LMS for funding opportunities.
RM-7	Post, Long	Ability to Rebuild Stronger Structures	Conduct Building Code effectiveness analysis: County should <i>continue</i> to conduct analysis of the adopted building code in search of areas that can be improved as a means to increase public safety.	Major & Catastrophic	Unincorp. County and XX Municipalities	Building & Housing	After deactivation of plan.	In-house staffing or partner with local universities to conduct research.
RM-8	Pre, Short	Ensuring Strong Code Enforcement	Revise "Post-Disaster Temporary Permit Suspension" (Building Moratorium) ordinance (Article XII, Sec. 7): Create a rolling moratorium, based on DAT reports, that utilizes the existing triaged damage assessment approach. Those areas which experience the most severe damage will have the suspension lifted later. This allows less affected areas to begin the rebuilding process. Also, place activation/deactivation authority in the hands of the Building Division Director, who will better recognize the personnel workload and backlog.	NA	Unincorp. County	Building & Housing	Immediate. One-time Action.	In-house staffing.

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RM-9	Post, Short	Ensuring Strong Code Enforcement	Activate Mutual Assistance Agreement: Utilize network and agreements set up within Building Officials Association of Florida (BOAF). Personnel from outside the County will be used for habitability assessments and customer relations, beyond the usual working routines of County inspectors.	Major & Catastrophic	Unincorp. County and XX Municipalities	Building & Housing	Immediately following analysis of DAT findings.	In-house staffing.
RM-25	Pre, Short	Communicating with & Involving the public in Recovery and Redev. Issues	Encourage faith and community organizations to collect evacuation contact information: These groups could ask their members to provide email addresses and phone numbers (i.e., cell numbers or out of state family) they could be reached through in the event of long-term evacuation. The groups could then assist in getting messages about repopulation and rebuilding out during the recovery period.	NA	Countywide	Communication and Public Education	Immediate.	In-house staffing.
RM-10	Post, Long	Communicating with & Involving the public in Recovery and Redev. Issues	Utilize Visioning Process for severely impacted areas: The Visioning Process found in Appendix D should be utilized to avoid piecemeal redevelopment and include citizen participation.	Major & Catastrophic	Unincorp. County and XX Municipalities	Communication and Public Education	After completion of damage and habitability assessments.	In-house staffing. Funding needed for advertising and facilitation/planning services.
RM-26	Post, Short	Communicating with & Involving the public in Recovery and Redev. Issues	Secure access to County Channel 20, School Board channel 19 (TEN), and other media outlets to disseminate information: Electronic media outlets should be a top-tier repair priority. Once restored, these outlets can forego usual programming to provide public information messages regarding recovery and redevelopment.	All	Unincorp. County	Communication and Public Education	After completion of damage and habitability assessments.	In-house staffing.

Palm Beach County Post Disaster Redevelopment Plan

ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations**
RM-11	Pre, Long	Limiting Redevelopment in Hazardous Areas	Create non-conforming structure inventory: Non-conforming structures -- those built prior to adoption of Comp. Plan/ULDC regulations of area, height, lot coverage, yard setbacks, lot location, parking, or other dimensional requirements -- are not allowed to be rebuilt to the previous standards upon reaching the 50% damage threshold. Maintaining an inventory will speed the decision making process for redevelopment orders and permitting.	NA	Unincorp. County and XX Municipalities	Land Use	Immediate.	In-house staffing or consultant costs.
RM-12	Pre, Long	Limiting Redevelopment in Hazardous Areas	Petition FDCA for expedited Comprehensive Plan amendment review/approval: In order to redevelop quickly and in a smarter fashion, the Comprehensive Plan may require amendments. The county could lobby FDCA to establish a temporary county office during redevelopment to attend planning meetings and charettes and rapidly process amendments.	NA	Unincorp. County and XX Municipalities	Land Use	Immediate.	None.
RM-13	Pre, Long	Limiting Redevelopment in Hazardous Areas	Renew funding for Conservation Land Acquisition Selection Committee (CLASC) purchases: The CLASC could play a role in post-disaster land acquisition if properly funded. Also, selection criteria should be expanded to include mitigation against natural hazards. Acquisition could allow the County to assemble parcels for inclusion in the open space program and it will enable the County to avoid the same amount of destruction in future storm events.	NA	Unincorp. County and XX Municipalities	Environment	Immediate.	In-house staffing, bond referendum or other funding source.

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RM-14	Post, Long	Limiting Redevelopment in Hazardous Areas	<p>Establish Revitalization, Redevelopment, & Infill Overlays (RRIO) in areas that experienced severe wind damage: This mechanism for redevelopment already exists within the Comprehensive Plan. Establishing RRIOs in those areas damaged significantly by a storm event (but not due to surge or flood) could encourage redevelopment and designate them as preferred receiving area for the county's TDR program. Incentives or grants for redevelopment could be prioritized for these areas.</p>	Major & Catastrophic	Countywide	Land Use	Immediately following analysis of DAT findings.	In-house staffing.
RM-15	Post, Long	Limiting Redevelopment in Hazardous Areas	<p>Down-zoning undeveloped parcels in hazard-prone areas: Where parcels have not been permitted for development and remain vacant (or where the parcel's existing use is not as high as the allowable use), post-disaster down-zoning should be explored as a means to reduce vulnerability to hazards. The post-disaster period provides an opportunity for the County to achieve a valid redevelopment and mitigation initiative.</p>	Major & Catastrophic	Countywide	Land Use	Immediately following analysis of DAT findings. Include as part of community visioning process.	In-house staffing.
RM-16	Post, Long	Limiting Redevelopment in Hazardous Areas	<p>Initiate municipal cooperation in Transfer of Development Rights program: The county Comprehensive Plan commits to establishing a countywide, multi-jurisdictional TDR program (FLUE, Policy 2.6-p). With the vast majority of coastal properties in municipalities, the County should explore transferring the development rights of damaged coastal properties to the less vulnerable inland locales.</p>	All	Countywide	Land Use	Immediately following analysis of DAT findings. Include as part of community visioning process.	In-house staffing.

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RM-17	Pre, Short	Including Mitigation in Rebuilding	<p>Partner with home improvement stores and major home builders to advocate structural hazard mitigation: By spreading information about mitigation techniques in the places where homeowners are turning to start repairs they could be persuaded to include mitigation while they are making repairs. Stores and contractors can be armed ahead of time with educational materials to offer customers during redevelopment after a disaster.</p>	NA	Countywide	Building & Housing	Immediate.	In-house staffing and educational materials. Solicit partner companies to pay the cost of printing.
RM-18	Post, Short	Including Mitigation in Rebuilding	<p>Expand One-Stop Permitting Centers to include mitigation information: At the existing county building division regional offices which serve as rapid permitting centers after a disaster, also include technical information and expert advice about including mitigation techniques during repairs and rebuilding. Information about financial assistance available for including mitigation and how to find a contractor who can use new mitigation techniques may make it easier for some to include mitigation. Simply being asked prior to permits being processed if they have considered any of the mitigation solutions and pointing them to information on them could be a major influence and help to build a more disaster resistant community.</p>	All	Unincorp. County & XX Municipalities	Building & Housing	Include mitigation information as soon as center opens.	Partnering with non-profits that specialize in hazard mitigation could make this a no or low cost action.

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ID	Action Period	Issue Topic	Action	Disaster Level	Jurisdictions Involved	Responsible Working Group*	Approx. Timeframe	Funding Considerations**
RM-19	Post, Long	Including Mitigation in Rebuilding	Institute landscaping & invasive vegetation public education campaign: Non-natives are poorly adapted to the local environment and are more likely to topple or become wind borne, thus causing damage during storm events. Preventing citizens from purchasing and landscaping with them will create a safer, redeveloped community. PBC could team with major lawn and garden centers to reach more citizens (Art. 14 of ULDC).	All	Countywide	Environment	Once commercial/retail centers are again operational.	Printing costs for educational materials could be solicited from partner companies. Cooperate with enviro. & ag. groups on outreach efforts.
RM-20	Pre, Long	Including Affordable Housing in Redevelopment Projects	'No Net Loss' Resolution adopted: Jurisdictions can pass a resolution to show support for all citizens to return after a major or catastrophic disaster and the intent to provide housing for a mixture of income levels. Any measure more stringent may encounter property rights issues.	NA	Unincorp. County and XX Municipalities	Administration	Immediate. One-time action.	None.
RM-21	Pre, Long	Including Affordable Housing in Redevelopment Projects	Address Post Disaster Redevelopment in the County Workforce Housing Program regulations: Include provisions in the County workforce housing program addressing redevelopment. The program could require workforce housing be included in those apartment/condo buildings and/or developments which experience damages in excess of 50% of the total value. Also, all new post-disaster construction must be in compliance with the existing workforce housing program.	NA	Unincorp. County	Building & Housing	Immediate.	None.

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RM-22	Post, Short	Including Affordable Housing in Redevelopment Projects	Expedite grant and loan funding processes: Provide quick financial assistance - through SHIP, HOME, etc. - to those homeowners lacking home insurance & unable to rehabilitate structures in timely manner. Distribute through Community Redevelopment Centers.	All	Unincorp. County and XX Municipalities	Finance	As soon as possible.	In-house staffing and utilization of mutual aid agreements for additional staff.
RM-23	Post, Long	Including Affordable Housing in Redevelopment Projects	Create Community Land Trusts: County can promote & assist in the formation of CLTs to preserve existing and reconstruct lost affordable housing. The CLTs can be used in post-disaster visioning process as a vehicle for implementation.	Major & Catastrophic	Countywide	Land Use	During redevelopment visioning process.	Typically funded through grants to start. Disaster Recovery Fund could provide some assistance.
RM-24	Post, Long	Disaster Resistant Public Funding Decisions	Public Facility retrofits/repairs built to exceed current standards: When retrofitting/reconstructing public facilities, the County can exceed current FBC standards in order to improve mitigation efforts, secure publicly funded investments, and set an example for citizens.	All	Unincorp. County and XX Municipalities	Infrastructure	After completion of damage and habitability assessments.	Increased costs but may lower insurance and future repair costs.

* See Section 3 for a list of Working Group Chairpersons or Appendix D for a suggested list of Working Group contributing members

** See Appendix D for funding source information.

LG= Local Government Recovery Issues (Section 2.1), EP= Economic and Private Sector Issues (Section 2.2), SE= Social and Environmental Issues (Section 2.3), RM= Redevelopment and Mitigation Issues (Section 2.4)