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**EDA's Post-Disaster Assistance Program
After Hurricane Andrew:
Final Report**

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13. ABSTRACT (Maximum 200 words) Hurricane Andrew devastated parts of South Florida in August 1992, causing \$20 billion in property damage, killing at least 41 people, and injuring many more. EDA joined other federal agencies in the disaster recovery process by promptly sending a team to Miami to help the area begin to revive and reconstruct. EDA funded 29 projects, including planning grants, revolving loan funds, infrastructure projects, building renovations and improvements, and training and technical assistance programs, for a total of over \$50 million. This assessment of 16 of the 29 projects, conducted three years after the disaster and more than two years after these projects were funded, demonstrates that an EDA team strategy of on-site assistance in the project development phase and a recognition that economic needs extended beyond the immediate devastated area resulted in substantial economic recovery. Projects were ranked comparatively using the variables (1) effective leadership, (2) stakeholder empowerment, (3) job creation, (4) effective progress, (5) creation of partnerships, and (6) leveraging of secondary resources. The evaluation concludes that a strategy of careful planning and a sustained commitment by EDA significantly affected project success. Outcomes included the creation of thousands of jobs through technical training and assistance, the renewal and improvement of infrastructure, and the formation of sustainable economic development networks.				
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EXECUTIVE SUMMARY

Purpose of the Report

After Hurricane Andrew devastated parts of South Florida in August 1992, the Economic Development Administration (EDA), an agency of the U.S. Department of Commerce, rapidly established a presence in Miami and began work to help localities and organizations begin to recover. EDA funded 30 disaster relief and recovery projects, including planning grants, revolving loan funds, infrastructure projects, building renovations and improvements, and training and technical assistance programs, for a total of over \$50 million. Some two years after these projects were approved and funded, EDA commissioned Aguirre International, a firm specializing in social research and program evaluation, to examine the effectiveness of the EDA approach and to assess the preliminary impacts of the projects funded. This report assesses the overall impact of EDA's program to assist South Florida's recovery.

Two principal questions guide this evaluation:

- Can appropriate post-disaster economic assistance give communities the opportunity to regain their former condition and even to enhance their quality of life beyond their pre-disaster conditions?
- Does such assistance have ramifications beyond the immediate impact area?

Of the thirty South Florida projects funded, sixteen were reviewed in the assessment, using a case study approach. A wide range of project stakeholders were interviewed in each case, establishing a broad basis of information for analyzing project outcomes. Projects were compared using six indicators—job creation, leverage of additional funding, creation of economic partnerships, empowerment of stakeholders, effectiveness of their leadership, and

progress in reaching objectives. This model provides substantive information on the degree to which EDA-funded projects have contributed to the post-disaster recovery.

The study examined

- what project outcomes were realized;
- the appropriateness of the project in relation to the needs created by the disaster;
- the economic impact of the EDA-funded projects in the project area and in the broader region; and
- the social impacts and benefits of the project on the target population.

Background of EDA's Disaster Assistance

EDA was established thirty years ago to help stimulate growth in economically depressed areas of the United States. It is an agency of the United States Department of Commerce. The role of EDA in post-disaster recovery is to provide assistance to achieve long-term economic recovery through a strategic investment of resources.

EDA provides post-disaster economic recovery program grants for

- planning;
- public works/infrastructure;
- technical assistance/business incubators; and
- revolving loan funds.

Potential grantees for EDA disaster recovery assistance include state and local governments,

quasi-public entities such as public utilities and local development corporations, and public or private nonprofit corporations.

Title IX of the Public Works and Economic Development Act of 1965, EDA's founding legislation, authorizes EDA to respond to disasters when two conditions are met: (a) the President proclaims a particular event location a federal disaster area; and (b) Congress establishes a special, specific appropriation for EDA.

Findings

Whereas EDA focuses on projects that recover and improve upon the physically impacted disaster area, it also seeks to fund projects beyond the physically impacted area. Direct physical effects of disasters have a ripple effect that extends outward to the surrounding geographic area (see box). For example, outmigration, job displacement, and loss of markets affected the surrounding region, resulting in job loss and economic devastation.

A common misconception of disaster events is that the impacts of the disaster only extend to the limits of the physically destroyed area. Community ties extend far beyond the boundaries of any particular spatial boundary or economic development zone. Physical disaster impacts in a community can thus create a ripple effect that spreads to surrounding areas.

EDA's strategy has had a regional impact that will contribute to positive momentum in the economy of the area. The program appears to have been successful in stimulating economic growth which, in some cases, even surpasses pre-disaster conditions. Improvements linked to EDA assistance are reflected in new jobs generated, increased income, small business loans, taxes, job

training and technical assistance, renovation of old businesses, creation of new businesses, and the development of economic partnerships and networks.

Conclusions

As a result of the research and field work undertaken in this assessment, we draw the following conclusions.

- There is a demonstrated need for post-disaster assistance that is not just geared to returning to the status quo in a local area, but in fact has a long term economic impact on an entire region.
- EDA took into account the economic "shock wave" effect of natural disasters such as Hurricane Andrew and selected projects outside the immediate impact area.
- EDA selected projects that responded to a strategic analysis of the regional economy by involving local governments in regional strategic planning that created sustainable economic development networks.
- The EDA team approach that established a fully functioning field office, co-located with other disaster recovery agencies, was very effective in maintaining an ongoing dialogue with local officials and potential grantees.

Recommendations

The following recommendations are drawn from the analysis of case studies and the analysis of the EDA approach to disaster assistance.

- Since disaster response must be timely, EDA should codify its disaster mitigation

initiatives, so that it can respond more quickly and effectively when disasters occur.

- EDA should maintain its present team approach in post-disaster recovery, and this approach should be standardized for future post-disaster assistance.
- On-site management of disaster assistance delivery should be continuous for the duration of the activity. This establishes trust and confidence among project managers and improves the possibility that projects will succeed and show effective progress.
- The review of planned projects, and the evaluation of an ability to manage a project, should include careful consideration of the experience of the proposed project manager in the kind of project proposed.
- Project planning and proposal evaluation for ethnic populations should be conducted with the help of identified cultural brokers to sharpen the effectiveness of implementation objectives.
- Key issues of project design, the establishment of milestones, and project

completion should be addressed in the project brief and in grant documents.

- Criteria should be established to better monitor *effective progress* of projects. Projects that do not show effective progress after a midpoint evaluation, under the five year guidelines, should be considered for termination.
- Based on the relative success of technical training projects and planning grants, EDA may wish to consider increasing the proportion of its funding in those categories. The distribution of funding across project categories should not be formulaic, however, but rather should respond to the specific nature of the disaster.
- Since it has been demonstrated that there is a shock wave effect with significant impacts on the surrounding region, the selection of projects outside the directly impacted physical area should continue.
- EDA should codify its assessment procedures in order to effectively track the magnitude and direction of project impact on the post-disaster recovery process.

INTRODUCTION

EDA and Hurricane Andrew

The Economic Development Administration (EDA), an agency of the Department of Commerce, was created under the Public Works and Economic Development Act of 1965 (PWEDA)¹ to stimulate economic growth in economically distressed areas of the United States through a strategic investment of resources. EDA typically works with local-level entities—municipalities, county governments, quasi-public entities such as utilities and local development corporations, and public or private nonprofit organizations—to develop projects and offer grants for public works projects and revolving loan funds in both rural and urban areas.

The agency also funds planning services and technical assistance to help communities create strategic development plans and conduct feasibility studies to overcome obstacles to economic growth.

Part of EDA's mandate is to respond to cases of, as the PWEDA legislation terms it, "a major disaster," as declared by the President. Special Congressional appropriations give EDA the means to furnish emergency assistance to areas struck by disasters and other economic crises, both natural and man-made. In the past several years, EDA has assisted communities throughout the U.S. in responding to hurricanes, earthquakes, floods, and military base closings.

After Hurricane Andrew devastated parts of South Florida in August 1992, EDA rapidly devised a strategy to establish a presence in Miami and to help localities and organizations begin to recover. EDA funded 30 projects, including planning grants, revolving loan funds, infrastructure pro-

jects, building renovations and improvements, and training and technical assistance programs, for a total of over \$50 million. Some two years after these projects were approved and funded, most are either completed or well underway. To examine the effectiveness of the EDA approach and to assess the preliminary impact of the projects funded, EDA signed a cooperative agreement with Aguirre International, a firm specializing in social research and program evaluation, to conduct this independent assessment.

This report assesses the overall impact of EDA's program to assist South Florida's recovery. It represents the final results in a five-month effort to determine how EDA did its job and what the results of its efforts are. The report reviews EDA's operational approach, then provides case study descriptions of 16 projects funded by the Hurricane Andrew recovery effort. Two principal questions guide the study:

- Can appropriate post-disaster economic assistance give communities the opportunity to regain their former conditions, or even to enhance their quality of life beyond their pre-disaster conditions?
- Does such assistance have ramifications beyond the immediate impact area?

The report will examine

- what project outcomes were realized;
- the appropriateness of the project in relation to the needs created by the disaster;
- the economic impact of EDA-funded projects in the project area and in the broader region; and
- the social impacts and benefits of the project on the target population.

¹Public Law 89-136 USC 3121 et seq (PWEDA).

EDA Disaster Assistance— Its Role and Purpose

EDA provides assistance to disaster-impacted communities through strategic investments. The goal is to achieve long-term economic recovery and growth. Strategic economic planning requires a detailed understanding of the economic potential and functioning of an area. To achieve this, EDA enters into cooperative partnerships with disaster-impacted communities to

- comprehensively assess and analyze local economic damage;
- formulate a recovery strategy with local economic priorities; and
- develop federal, state, and local partnerships to rebuild the local economy.

The implementation projects proposed are based upon local priorities and flow from the strategic economic recovery planning process. Communities and their representatives decide what their development needs are and how they should be addressed. The role of EDA is to help communities through a strategic planning process that leads them to focus on viable and achievable objectives. EDA then reviews prospective projects and provides advice and guidance in accordance with the funding guidelines of the agency.

When EDA is mobilized after disasters, its grant funds are available to potential clients in the following ways:

- planning and technical assistance grants to help local communities analyze local economic injury and develop strategies for recovery;
- public works and infrastructure grants to buttress other local responses to health and safety needs;

- technical assistance grants and support for business incubators to assist local communities in implementing their economic recovery strategy; and
- revolving loan fund grants to public and nonprofit organizations to provide loans to businesses in support of economic recovery strategies.

In some cases, the outcomes of the above assistance strategies are achieved through training and technical assistance beyond economic recovery planning. Such assistance can magnify and multiply the overall economic impact far beyond the initial project outcomes. Thus, one goal of EDA funding is to act as a triggering mechanism for economic development and recovery that surpasses the previous status quo. The desired outcome is a point where a state of *sustainable improvement* of local socioeconomic conditions is achieved.

Assessment and Policy

Title IX of the Public Works and Economic Development Act (PWEDA), EDA's founding legislation, authorizes EDA to respond to disasters and other public emergencies. In practice, however, EDA only responds to disasters when two conditions are met: (a) the President proclaims a particular event location a federal disaster area and (b) Congress establishes a special appropriation for EDA, usually along with other entities, to address the recovery from a particular disaster. Without the special appropriation, EDA cannot provide economic development assistance beyond the scope of its regular annual program.

This report examines the results from a particular case when EDA was directed to provide disaster response assistance. For the Miami post-disaster assistance response, EDA developed a particular approach that attempted to maximize what EDA

sees as its strong points. EDA's strengths include long experience in a range of economic development approaches; the practice of facilitating, with local governmental decision makers and other community stakeholders, the development of a long range regional strategy; and an agile administrative framework that permits fluid contact between potential grantees and EDA throughout the proposal development and funding period. This "Miami model" calls for a centralized field office and intensive work starting soon after the disaster, leading to a kind of "double spike" of activities: working with local governments in fostering strategic regional planning soon after the disaster occurs, and then supporting those governments and other entities with funding for project implementation activities in the recovery phase.

This model will not be appropriate for every natural or economic disaster that EDA faces. The geographically dispersed nature of the Midwest floods, for example, would not easily permit a centralized office. However, the Miami approach would work in many cases, including hurricanes, tornados and other storms, most earthquakes, and for other disturbances, such as droughts.

In the Miami case, special appropriations provided both a significant sum for direct programming grants as well as an increment to administrative funds, permitting the assignment of staff and resources to the support of the Miami activity. This has not always been the case. For example, in the 1993 Midwest flooding or the work EDA has done in the southeast after Hurricane Alberto, no additional staff funding was provided with the extra program funds. Likewise, the grant funds administered through EDA for local economic development to compensate for the widespread military base closings over the past several years were not accompanied by administrative funds.

Nevertheless, most EDA staff stated, based on the Hurricane Andrew experience, that EDA has a

significant role to play in disaster response, a role distinct from such other agencies as the Small Business Administration or the Department of Housing and Urban Development. EDA is looking at initiatives to take to mitigate the cost for future disasters. The goal is to include, in the strategic planning process, explicit efforts to build safer communities. For example, in the planning area, work with communities historically subject to flooding would include developing mitigation components within regional planning efforts, such as increasing the capacity of storm water culverts for increased water flow or funding projects of road access above the floodplain.

To examine the range of recovery and mitigation options, EDA requested this assessment of its post-disaster assistance initiative in Miami. EDA's post-disaster assistance approach requires the ability to plan ahead strategically—to predict long-term benefits from short-term investments. The benefits from such investments may be difficult to identify, much less justify, if there is no way to measure them. This assessment is an attempt to identify and measure post-disaster benefits from the Miami case.

The conclusions and recommendations derived from this model reflect a benchmark assessment, since few studies that deal specifically with a post-disaster assistance program like EDA's have been conducted (Kinkaide, Bradley and Kyba 1991). A review of literature dealing with related topics of disaster mitigation is included in the Bibliography section of this report. It is expected that this model will be refined and adapted to fit the differing circumstances EDA and other relief agencies face in responding to post-disaster development needs. However, we believe that this work provides a necessary foundation for assessment of future disaster scenarios, and for the special role of EDA in responding to these scenarios.

Assessment Methodology

The assessment adopted a wide range of methods to deal with the variety of projects and impacts in the EDA assistance program. It includes two analytic components:

- an analysis of new institutional developments, such as regional planning and coordination efforts, the creation of new economic partnerships, and enhanced community participation linked to the EDA assistance and recovery process; and
- a case study analysis of selected EDA-funded recovery projects in the impact area.

The *institutional analysis* focuses on the cooperative networks and partnerships that have been created or have grown as a result of the EDA assistance program after Hurricane Andrew. Institutions that became actively involved in organizational networks will be identified and their roles in the recovery process documented.

The 16 *case studies* document the histories and current circumstances of each project. Projects are selected according to the *type* of assistance offered (for example, whether it is a revolving

loan fund, the renovation of a facility to be used for workforce training, or a public works project) and according to its *geographic location* (that is, projects that are squarely in the zone of maximum hurricane damage, as well as those that serve communities which escaped the worst destruction but which suffered associated economic impact). The case studies are based on detailed interviews with selected individuals who are stakeholders in the projects being evaluated. For example, project managers, community supervisors, EDA representatives, chamber of commerce officials, and members of the target beneficiary population for whom the project is designed are all potential information sources—key informants.

The case study is then constructed by combining and comparing the responses of these various “key informants” with available public documentation of the project, including planning documents, historical sources on project development, and public commentary on the activity. What emerges is a descriptive account of the project, organized in a progressive time line from the disaster through the planning and development stages of the project up to the present time. (A more complete description of the methodology is included in the Methodology section of this report.)

HURRICANE ANDREW AND ITS IMPACT ON SOUTH FLORIDA

Introduction

The following brief review of the impacts of Hurricane Andrew on South Florida is provided to allow readers to understand the conditions faced by EDA and other agencies in their recovery efforts. It also provides background data with which to understand and assess the recovery strategy and decision-making process used by EDA in 40 weeks of on-site work after Hurricane Andrew.

When Hurricane Andrew struck South Florida's coastline early in the morning of August 24, 1992, it became the most costly storm in U.S. history. The hurricane hit with winds in excess of 170 mph, killed at least 41 people and injured many others, and caused about \$20 billion in property damage. The worst physical damage inflicted by Hurricane Andrew occurred in that portion of Dade County from Kendall (beginning at S.W. 88th Street) south to Florida City. The affected zone included the communities of Perrine, Goulds, Princeton, Naranja, Cutler Ridge, Kendall, the Redlands, Richmond Heights, West Perrine, Homestead, and Florida City (see Figure 1, A Map of South Florida). This area contained 8,000 of the 59,000 businesses in Dade County and 120,000 jobs, providing workers with an estimated personal income of \$4.5 billion.

Small business was the principal economic activity in these areas: 60 percent of all firms/establishments employed less than 5 persons each, and 96 percent employed less than 50 people. The service sector—including banking, insurance, hotels, health care, business personnel, real estate, and government—accounted for nearly 63 percent of all jobs in the area. The wholesale and retail commercial sectors accounted for 24 percent of employment. Agriculture, construction, mining,

and manufacturing accounted for 13 percent. The area most damaged by the hurricane accounted for approximately 12 percent of Dade County's \$38 billion personal income and 14 percent of its 878,000 jobs and 59,000 businesses (Metropolitan Dade County 1993:9).

Loss of Jobs

Job loss in the disaster area was immediate and dramatic. The largest employer, Homestead Air Force Base, was virtually destroyed. Goodwill Industries had over 300 employees working at the base. These jobs generated over \$5 million in revenue for Goodwill, representing approximately one-half of all their available resources. The jobs and revenue were lost overnight when the base was destroyed.

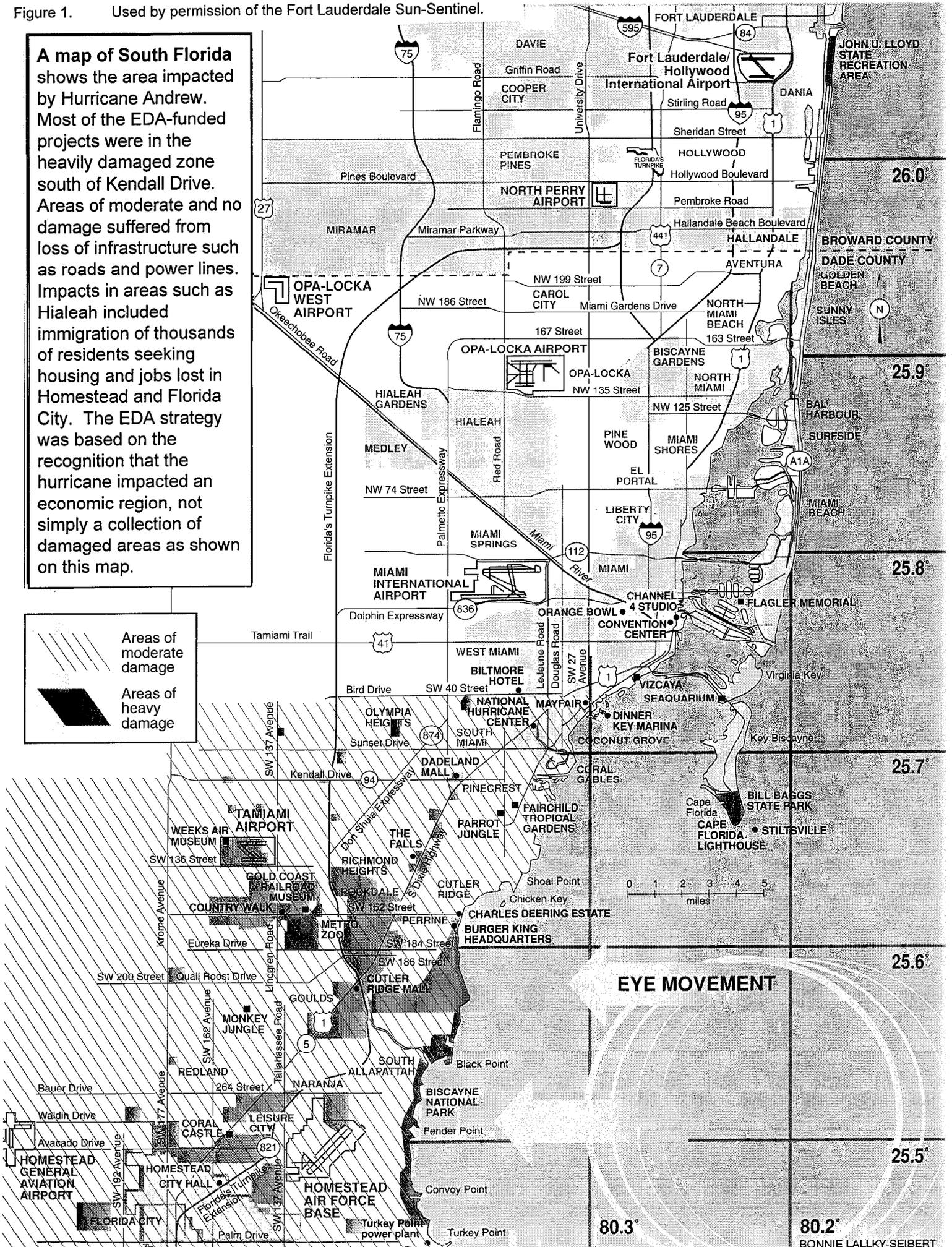
Many small businesses were shut down for months. Those businesses that reopened lost customers who either could not afford their services or had moved out of the area. According to the Beacon Council (a planning and development organization), only 60 percent of the businesses had reopened as late as July 1993. These businesses operated at approximately 75 percent of their previous employment level.

It is estimated that by mid-1993, 21,000 people were back at work in the hurricane area. However, 55 percent of those displaced by the disaster remained unemployed at that time. The area south of 152nd Street in Dade County and Monroe County was even slower to recover. Some 70 percent of the businesses in this area were still closed as of mid-1993. Only 16 percent of the jobs existing in this area were reclaimed by mid-1993. Those businesses that did manage to

Figure 1. Used by permission of the Fort Lauderdale Sun-Sentinel.

A map of South Florida shows the area impacted by Hurricane Andrew. Most of the EDA-funded projects were in the heavily damaged zone south of Kendall Drive. Areas of moderate and no damage suffered from loss of infrastructure such as roads and power lines. Impacts in areas such as Hialeah included immigration of thousands of residents seeking housing and jobs lost in Homestead and Florida City. The EDA strategy was based on the recognition that the hurricane impacted an economic region, not simply a collection of damaged areas as shown on this map.

 Areas of moderate damage
 Areas of heavy damage



reopen struggled with the damaged infrastructure, which took months to recover.

Lack of water, sewer, and electricity, and difficulty in physical access, all diminished profits and resulted in further business closings and job loss. Customers were more concerned with survival and self-recovery than resuming their previous product and service consumption patterns. These patterns were critical to the survival of the regional small business economy. For example, fish markets selling products such as shrimp and lobster were shut down partly due to a lack of electricity and suppliers; but also because customers did not consider these food products as essentials but rather as luxuries they could no longer afford.

Before the hurricane, Homestead and Florida City, and surrounding regions such as Naranja and Princeton, were major producers of fruits, vegetables, and exotic tropical plants. Andrew destroyed the agricultural areas around Florida City and Homestead, including many millions of dollars' worth of tropical plant nurseries, as well as groves of citrus, such as key limes. When the agricultural industry was shut down by the disaster, thousands of low-income residents and migrant workers lost their jobs.

Outmigration from the Impact Area

The 1990 census recorded a population of 26,694 residents in Homestead. However, the population dropped 40 to 50 percent after Hurricane Andrew. As of April 1993, the population had rebounded to 18,732 residents, according to the Bureau of Economic and Business Research at the University of Florida. Including seasonal visitors, the total population for mid-1993 was estimated to be nearly 23,000.

Many who left the Homestead area, and who did not return, were elderly seasonal visitors who spent their winters there, the so-called "Snow Birds." The income generated by this group has not been recovered. Business leaders are concerned that those who left carry with them the image of a region devastated by the storm and have not seen the recovery nor the progress made since the hurricane. Because of this and the retooling of the business sector, city managers of both Homestead and Florida City do not consider their municipalities *recovered*. The most recent demographic figures (1994-95) show that the city of Homestead has an estimated 26,800 residents.

It is also generally believed that there has been an outmigration of white, English-speaking residents from the area. Some respondents suggested that "white flight" was caused by the impact of Hurricane Andrew, especially the shutdown of Homestead Air Force Base. The city manager of Homestead, the former Commanding Officer of the base, supports this view. He notes that, formerly, officers who retired from the base would enter the community and contribute to it both socially and economically. Since the disaster, this pool of individuals left the community and has not returned in any substantial number. One outcome has been a shift in the ethnic makeup of the area. Both the white and black populations have decreased slightly, while the Hispanic population has increased substantially.

Housing Impacts

The substantial loss of housing after Hurricane Andrew also spurred outmigration from the area. The storm initially damaged 125,000 homes and apartments (of which 63,000 were completely destroyed), and left 160,000 people homeless throughout the area. In Dade County alone, approximately 49,000 housing units were in need

of replacement, leaving most of those residents homeless. The newly homeless were forced to look for residence in places other than Dade County. This is an example of a ripple effect (the disaster "shock wave") affecting the area outside the physically damaged zone (refer to the EDA Response Strategy section of this report).

One municipality that has been severely affected by post-disaster migration patterns is the city of Hialeah. An indicator of the hurricane's impact on Hialeah was the loss of affordable housing. Before Hurricane Andrew, Hialeah had a housing vacancy rate of approximately 4.5 percent. After the hurricane, this dropped to a low of 0.1 percent, and in 1995 this level still exists. Landlords took advantage of this emergency situation and raised monthly rental rates, thus forcing some existing tenants into homelessness.

Loss of Infrastructure and Organizational Capacity

Hurricane Andrew was accompanied by a severe loss of infrastructure and organizational capacity. As noted, thousands of homes were lost, and public buildings and private businesses were also

destroyed or suffered severe damage. Power lines were severed, road signs destroyed, and general chaos ensued until some 23,000 federal troops provided relief and secured the area against widespread looting and other crimes (*Sun Sentinel* 1992:5 and 17; Anonymous 1993:1-8).

Without outside assistance damage to basic infrastructure may be the most difficult area for recovery. This is partly because the primary revenue source, the local tax base, is diminished as businesses and taxpayers leave the area and as those remaining struggle to recover from their own losses.

One of the problems faced in South Dade prior to the hurricane was the absence of an established planning infrastructure between the municipalities and the county. This absence of organizational capacity was most apparent in the disaster mode. Many of those responsible for administering city services and making decisions on the daily functioning of public facilities were overwhelmed after Hurricane Andrew, followed by a loss of a patterned routine and organizational capacity. Recovery efforts were hampered there by the lack of partnerships and cooperative networks among various levels of government, municipalities, and private-sector decision-makers.

EDA RESPONSE STRATEGY

This section is based on a broad range of interviews involving EDA clients and other community leaders. The goal is to characterize the approach that EDA used after Hurricane Andrew to respond to the area's economic recovery needs.

EDA was one of many federal agencies to respond to the natural disaster in Dade County and its environs. In terms of financing, other agencies [especially the Federal Emergency Management Administration (FEMA)] had access to many times the funds available to EDA. Nevertheless, EDA became a major player in the post-disaster recovery effort. The agency took the initiative to establish an active, client-centered program that worked with local leaders. The program developed linking strategies in order to reestablish a positive business environment and create jobs.

Funding and Timing of Response

EDA funded projects after Hurricane Andrew with funds made available through Public Law 102-368, the Dire Emergency Supplemental Appropriations Act, enacted September 23, 1992. The Act appropriated \$70 million for EDA to address recovery efforts after Hurricane Andrew in Florida and Louisiana; and the remainder to Hurricane Iniki in Hawaii, Typhoon Omar in Guam, and damage to electrical cooperatives in Kansas caused by severe storms in July of that year. These funds were made available to follow up FEMA and other emergency programs, and were designed to stimulate long-term economic recovery and to assist governmental units and related organizations to build and promote job recovery.

The funds for EDA grants were administered through the Sudden and Severe Economic

Dislocation (SSED) program, under Title IX of the PWEDA. EDA regulations require that an affected area have a recovery strategy for implementation projects to be approved. Unlike most aid agencies, detailed project planning by clients is a prerequisite for EDA funding.

The recovery effort in Dade County was divided into two phases and proceeded through a community-wide partnership designed to provide a forum for reaching consensus on the design of economic strategies. Phase I of this recovery effort focused on short-term activities that could address some of the urgent needs facing the community. Phase II of the recovery plan focused on the initiation of a long-term recovery process that would work towards achieving the pre-disaster status quo but also looked to provide avenues to improve on what was lost in the hurricane.

During the preparation of Phase I, EDA began receiving proposals from the affected communities and organizations for projects that would initiate long-term recovery. The agency received 69 proposals requesting approximately \$130 million. These proposals were solicited and received in consultation with an economic recovery consortium of over 100 public- and private-sector representatives.

Careful evaluation of submitted proposals resulted in the funding of 30 proposals for a total of \$50,875,100. Some 96 percent (\$49,110,100) of these funds were earmarked for projects in Dade County, where the majority of hurricane impacts occurred. More than 80 percent of these funds were for projects located south of Kendall Drive (S.W. 88th Street; see Figure 1, A Map of South Florida), identified as a marker south of which the majority of all hurricane damage occurred. Homestead and Florida City, the most directly

impacted municipalities in this area, received over \$24 million (48%) of the total project funds.

EDA began working in South Florida in October 1992. The EDA response mandate was not to provide assistance for the immediate emergency relief for basic needs and services. Rather, the EDA focus was on long-range economic planning and project development that could potentially maximize sustained benefit over time. However, short-term planning did occur to some extent from the partnership and network building that was encouraged by EDA.

Planning grants awarded by EDA also had some short-term recovery implications. When EDA arrived in Florida, they were responding to clients who had heard of the availability of funding from the *Federal Register* and from other sources such as local chambers of commerce. Many of those responding to EDA requests for projects were city and county grants officers whose job was to search for such funding. The EDA regional staff held a series of public meetings to explain EDA funding policy and guidelines.

When EDA arrived, FEMA, the Red Cross, and other state and federal relief and recovery agencies were already on-site working to restore basic needs and services to the populace. EDA timed its arrival to the point when services were sufficiently restored so decision makers and other key stakeholders could turn their attention to the issue of economic recovery.

A Team Approach

The team was led by Boyd Rose, Chief, EDA's Planning and Technical Assistance Division, Atlanta Region. He was assisted by a core group comprised of Bill Day, the Florida EDA representative; Lola Smith, the Georgia EDA representative; Jim Campagna, Community

Planner, Atlanta; Kent Lim and Jim Lavery, EDA Headquarters (part-time); Lorraine Furst, secretary, Atlanta Region; and Roy Burnem, Economic Adjustment Program Specialists, who coordinated processing activities in the Atlanta Regional Office. The team was supported by other Regional and National Office staff.

The team approach taken by EDA relies on key personnel who have many years of experience in post-disaster assistance and economic planning and development.

The team also had regional technical support from specialists in planning and economic development, engineers, environmental specialists, grant processing specialists, and other experts in disaster recovery. The EDA staff supported each other on-site as they assessed the needs and reviewed the projects of the impacted area. This mutual support system required that they *remain on-site for the duration of time necessary to see projects through their funding approval phase*. In the case of Hurricane Andrew, the site office in South Florida remained in operation for 40 weeks.

Personal Accountability and On-site Access

EDA staff held frequent meetings with interested clients which permitted an ongoing dialogue between the on-site team and prospective clients. The team reviewed all prepared proposals; responses were flexible, based on an analysis of funding guidelines and a prioritization of development needs. Prioritization of needs was an interactive discovery process between a range of stakeholders. These included established planning partnerships and networks, prospective EDA clients, and the site team. EDA-funded planning grants provide the means by which municipalities

and counties determined their general priorities. However, the projects actually funded are selected on their individual merits, not necessarily on their correspondence to a particular planning agenda.

In interviews with project directors, staff, and grant managers, EDA was unanimously cited for exhibiting a high degree of professionalism and accountability in their relationships with clients. When asked to assess EDA's performance, one project director with many years experience in contracting with federal agencies responded: "They are the best federal agency I have ever dealt with."

The role of EDA was to facilitate the development of projects that had a high probability of success. When EDA turned down a proposal, the on-site team provided the applicants with an explanation that placed the denial in the context of established criteria and program priorities.

Throughout this process, and after projects were funded, the site team and supporting staff at the regional office were available for regular consultation. In the case of Hurricane Andrew, clients who were interviewed responded unanimously that the EDA team was available to answer any and all questions they had about projects. This included questions on such topics as project development, and project administration and funds disbursement.

When clients contacted the EDA team, they spoke to individuals who were known to them and who took responsibility for past communications and outcomes of the assistance process. The EDA professionals made themselves accountable to their clients.

The same individuals who began the process generally finished it. Clients were sure as to whom to call when questions needed to be answered. This allowed the project development

process to proceed in an efficient and timely manner.

Relationships with Clients

The EDA team encouraged clients to have unrestricted access to the on-site team members. The client relationships were based on the following management procedures:

- EDA team members were always available to answer the clients' questions, either in planned meetings or by phone.
- EDA scheduled meetings with potential clients so as not to interfere with the numerous responsibilities of those clients as they tried to manage their organizational affairs after the disaster. This sometimes meant meeting with them after regular working hours.
- EDA team members attempted to review all submitted proposals expeditiously and to provide advice and recommendations on how worthy proposals could be focused and improved.
- EDA team members conducted on-site assessments for proposed infrastructure projects. These same individuals reviewed the related proposals and forwarded them to Washington for concurrence. This continuity of staff personnel ensured a high degree of trust and accountability between clients and EDA team members.
- EDA solicited the local expertise and knowledge of stakeholders in identifying the major elements of the local economy that were impacted by the hurricane. This information helped guide the selection process to better ensure that funded proposals best fit local recovery needs.

- After projects were approved for funding, EDA was flexible in the project management process in the selection of project personnel or construction contractors and in the disbursement of approved funds. This empowered clients by providing them with the flexibility to adapt to changes in local conditions that affected project design, other project issues, and the timing of EDA's disbursements, particularly when other agencies were involved.

Partnership and Network Building

One of the principles of economic recovery that the team took into the field was the importance of creating partnerships with organizations in the impacted area. These partnerships can then develop recovery strategies and carry out the sustainable actions necessary to realize them. As described, EDA made planning grants to Broward, Monroe, and Dade counties and to the cities of Homestead and Florida City. EDA worked closely with these organizations during the preparation of their recovery strategies. With the assistance of EDA, metropolitan Dade County established a community-wide forum for reaching consensus on economic strategies.

EDA fosters partnerships by bringing stakeholders together, identifying common goals and issues, and providing planning grants that allow stakeholders to outline short-term recovery priorities and identify long-term development goals.

In a widely attended public forum, EDA impressed on potential grantees early on that funds would not be forthcoming unless they were willing to establish a planning process and coordinate with each other. Once this proviso was accepted, interviews with stakeholders suggested

that the value of planning won many converts. By emphasizing an approach based on planning, EDA was instrumental in helping municipalities put the disaster in the context of broader economic processes. This allowed administrators to organize their staff and resources towards the development of these economic recovery plans.

The EDA strategy of focusing stakeholders on developing economic recovery plans allowed individual decision makers to re-establish their organizational capacity and begin moving forward with the economic recovery process.

In the initial focus on short-term recovery, EDA created a consortium that involved over 100 public- and private-sector representatives. The first phase provided a framework for the implementation of immediate, short-term activities that could address some of the urgent needs facing the communities. The short-term initiatives identified during Phase I specified four major goals. Each goal contained strategies that, once implemented, would accomplish the goal to:

- re-establish viable, balanced, residential communities in South Dade;
- protect, restore, and build upon economic strengths and strategic assets;
- expand and improve delivery of governmental relief, assistance, and rebuilding support services; and
- improve upon the built environment that was destroyed.

After the consortium identified the immediate short-term needs, it recommended five work elements that required further study. Each element required a participatory process and a plan that was unique to the respective study area. For example, the preparation of a South Dade Tourism Development Plan was managed by the

Greater Miami Convention and Visitors Bureau (GMCVB), which has expertise in that area. In designing and implementing that plan, the GMCVB kept the same group together that had first worked jointly on tourism issues while planning the short-term disaster recovery strategy.

Similarly, the organizational activities of Tools for Change, which received a training and technical assistance grant from EDA, stressed partnerships. Tools for Change began a coalition-building process in Homestead and South Dade that focused on the recovery of small, minority-owned businesses in the region. This was carried out by working with local chambers of commerce, city planners, the Metropolitan Dade Community College-Homestead Campus, and many old and newly formed (post-hurricane) nonprofit organizations, such as the Haitian Organization for Women (HOW). Further examples of partnership and network building triggered by EDA are provided in the case studies section of this report.

Comparable approaches were undertaken for each of the work elements included under the long-term phase of the Consortium plan:

- establishing a Recovery Tracking Information System;
- developing a Labor Adjustment Strategy;
- designing a Tourism Development Plan for South Dade;
- creating a Homestead Air Force Base Utilization and Re-development Plan; and
- creating a Regional Development Plan, including preparation of a business development strategy for each impacted community.

The review and funding by EDA of 30 specific projects was a major outcome of the partnership building and consortium planning activities.

EDA PROJECT SELECTION

Design of the EDA Response

To respond to the long-term development needs created by Hurricane Andrew, EDA needed a broad understanding of the disaster impacts on the communities and surrounding socioeconomic areas. Points that EDA staff considered important in the development of a long-term economic recovery plan included the following:

- ▶ *The relief team needed to have a clear understanding of the social and economic dynamics of a region before they could make an adequate assessment of disaster impacts.*
- ▶ *Assessing the impacts of disaster events requires a sensitivity to existing community social and economic networks that extend beyond the immediate path of a disaster which can create a social and economic shock wave that “ripples” into the surrounding region.*
- ▶ *EDA staff must have an understanding of the business sectors of the affected area, since these are critical to the successful planning of sustainable long-range recovery.*

Understanding the Disaster Context

Disasters represent a disruption of the normal social and economic patterns of a community. Economic recovery in a disaster context differs from “normal” economic development. Initially, development resources are lost, and priorities redirected to deal with basic life needs. The point where outside development assistance is warranted occurs when the administrative infrastructure is sufficiently recovered for effective long-term planning to take place. EDA’s first actions in Miami, therefore, were to provide technical assistance grants to Broward, Dade, and

Monroe Counties, and the cities of Florida City and Homestead to augment their capacity for long-term strategic economic recovery planning.

Development proceeds along the lines of greatest necessity, with restoration of the status quo a principal rule. When recovery has progressed to the point where planning and administration of development can proceed beyond basic needs, EDA steps in.

A common misconception of disaster events is that the impacts of the disaster only extend to the limits of the physically destroyed area... Community ties extend far beyond the boundaries of any particular spatial boundary or economic development zone. Physical disaster impacts in a community or communities can thus create a multiplier effect that spreads to surrounding areas.

In order to provide for effective disaster recovery, federal grant administrators must discover these embedded ties and networks, and direct resources towards their reconnection and rejuvenation. At the same time, the physical impacts to a particular area can be expected to have a ripple effect that extends outward to the surrounding geographic region and can be mitigated with grant assistance. Outmigration, job displacement, and loss of markets (e.g., destruction of fruit and vegetable production in South Dade) can negatively impact a surrounding region, resulting in job loss and economic stagnation.

Any community that is not linked to a regional recovery plan will most likely stagnate, even if provided with aid that merely recovers what was lost. This is particularly true for communities that do not take advantage of the changes in development direction and momentum that occur during the post-disaster recovery process. For example,

areas in West Perrine lacked extensive economic networks and leadership before the hurricane. These poorer neighborhoods are still barely recovered from their immediate post-disaster state. By contrast, Homestead translated effective leadership and networking into several EDA grants that have allowed the City to take advantage of development opportunities such as the Homestead Motorsports Complex.

Selection of Funding Priorities and Categories

EDA funded four different types of projects:

1. planning grants;
3. public works/infrastructure grants;
2. technical assistance/business incubator grants; and
4. revolving loan funds.

EDA allocated a total of \$50,875,100 to 29 projects after Hurricane Andrew.

Local communities and organizations decide which activities to put forward for consideration. EDA assists in project development and selects projects based on their potential to contribute to long-term economic recovery. Criteria that guide selection and lead to project success are described in detail in the Findings and Project Outcomes section of this report. These criteria are both implicit and explicit, and include the following:

- job creation;
- leveraging secondary resources;
- creating partnerships; and
- stakeholder empowerment.

Project Solicitation

Projects were solicited in a number of ways. Initially, an announcement of the program was made in the *Federal Register*. When EDA staff arrived on site, public meetings were held to further describe the program. Meetings were conducted in cooperation with local, state, and county officials in the impact area. Projects were selected under the four project areas listed in the section above. Based on the above EDA procedures, the selection process developed as a dialogue between clients and EDA staff. The EDA team also attempted to determine if a proposed project could be best funded by some other available source. As noted, an understanding of the local economic character of the region was an important tool in the selection process.

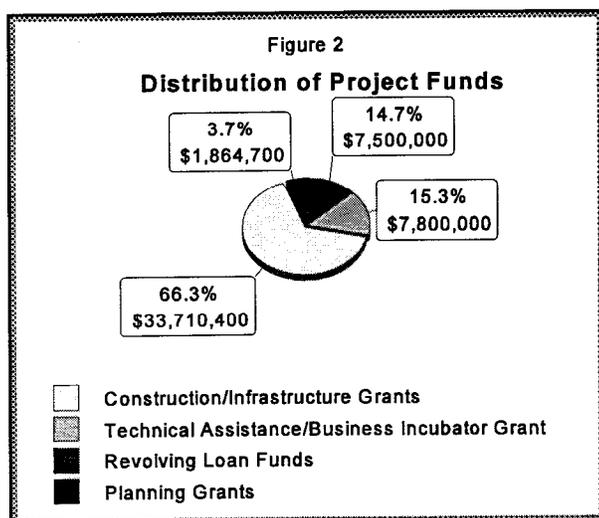
After a proposal was deemed to have merit, a project brief was prepared by EDA staff to present the proposal outline for speedy review in Washington. Speed was crucial to the recovery process because delays in funding can often lead to worsening of impacts. For example, avoidance of delays in the opening of a tourism facility like the MetroZoo was critical, because the customer base can “lose the habit” of visiting, resulting in significant losses in operating revenue.

The recovery process is noted by EDA staff and clients alike as an evolutionary one—that is, projects must be planned and funded early enough so they can be adapted to changes in conditions faced by communities in the post-disaster phase. One such adaptation is the securing of leveraged funds. In all but one of the infrastructure projects reviewed here, access to EDA funds was an important first step in leveraging significant amounts of funding from other public and private sources.

After the project brief was approved by the Washington office, a full proposal was then invited and submitted by the client. Funding usually was approved within three months after a full proposal was submitted.

Listing of Projects

EDA selected 29 projects in 4 different categories with funding of \$50,875,100. These projects were selected from 69 submitted proposals totaling approximately \$130 million. The distribution of awarded funds across the four categories is shown in Figure 2. A brief description of each funded project is provided below. Detailed descriptions of the highlighted projects can be found in the Case Studies section of this report.



Planning Grants

The following projects are those funded by EDA after Hurricane Andrew. Those projects with headings in bold are case studies in this report.

Broward County

EDA granted Broward County \$150,000 to produce a comprehensive study of ways to

achieve full economic recovery after the hurricane.

Metropolitan Dade County

The EDA grant provided \$200,000 for a comprehensive study of the needs of various communities in Dade County to achieve full economic recovery after Hurricane Andrew.

Metropolitan Dade County

EDA provided \$50,000 to be used by the Village of Key Biscayne for an economic adjustment strategy. The grant was a supplement to the \$200,000 grant listed above.

Miami Convention and Visitors Bureau

The Miami Convention and Visitors Bureau received \$1 million to develop promotional videos and brochures, increase national media coverage of the area after Hurricane Andrew, conduct other related marketing activities, and develop a long-range strategic plan to expand and revitalize the tourism industry.

Monroe County

EDA granted Monroe County \$125,000 to develop an adjustment strategy in response to the economic dislocation caused by Hurricane Andrew.

Homestead City

The City received \$139,700 for salaries of technical staff to help reestablish their organizational capacity.

South Florida Regional Planning Council

EDA provided \$200,000 to fund a strategic plan for economic development and increased international trade in three counties of South Florida (Broward, Monroe, and Dade).

Public Works/Infrastructure Grants

Everglades City

The EDA grant of \$1,830,000 was used for improvements to infrastructure disrupted by Hurricane Andrew. Improvements to the water and sewer systems include Everglades City and Collier County.

Florida City

EDA provided a \$5 million grant to replace and upgrade the water treatment and distribution system in order to facilitate growth after Hurricane Andrew.

Florida City

Florida City received \$2,865,000 to replace and expand the Municipal Services Complex, which included City Hall, the Police Station, and the Community Center. City Hall and the Police Station were destroyed by Hurricane Andrew.

City of Homestead

The EDA grant of \$7 million was used for the construction of water and sewer line infrastructure and road improvements in Homestead. This infrastructure extended present water and sewer service to include the new Homestead Motorsports Complex and Park of Commerce.

City of Hialeah

The City of Hialeah receive \$1.5 million for the rehabilitation of the old Hialeah train station into a farmers market.

Miami Downtown Development Authority

The Development Authority received \$2.5 million to renovate a building that would be converted into an international merchandising mart for leather goods. This mart would create an estimated 800 new jobs and increase international trade and commerce.

Miccosukee Corporation

EDA awarded \$1 million to develop tribal trust land near a strategically located highway interchange. The funding would be used for construction of public works infrastructure necessary for commercial and residential development.

Seminole Tribe

One million dollars was used for construction of infrastructure for a historical Indian Living Village and for the development of a plant and tree nursery.

Village of Key Biscayne

EDA awarded \$750,000 to construct a storm drainage system to alleviate problems associated with flooding; property damage, electrical problems, loss of utilities, loss of revenues, erosion, and environmental/health problems.

Metro Dade County Parks and Recreation Department

The Department received \$4.5 million to improve the infrastructure of existing facilities and to provide additional facilities for the expansion of the MetroZoo.

Metropolitan Dade County

The Miami Dade Water and Sewer Authority Department received \$5 million from EDA to install water and sewer mains, sewage pumping stations, and fire hydrants along the Dixie Highway. These infrastructure improvements will allow for future growth and expansion of the area.

Technical Assistance/Business Incubator Grants

Tools for Change

Tools for Change received a \$550,000 grant to provide technical assistance to small minority

businesses in order to integrate them into the local economy.

Center for Health Technologies

EDA was to provide this organization with \$1 million to renovate a building that would be used as an incubator for health technology companies (see the Executive Summary).

City of Hialeah

EDA's grant of \$1 million renovated and converted a manufacturing facility into a training and research center for the transfer of computer integrated manufacturing technology.

Florida International University

The Small Business Development Center received \$250,000 to fund a program of training and technical assistance for businesses in the area most affected by Hurricane Andrew (see the Executive Summary).

Goodwill Industries

EDA provided \$1.5 million to be used for building renovations and the purchase of equipment to train and employ low-income, handicapped, and/or disadvantaged persons.

Miami Dade Community College, Homestead

The EDA grant of \$1.5 million was used to renovate a building to be used as a business incubator. The incubator would also provide counseling and technical assistance to small business owners.

Miami Dade Community College, Perrine

This \$2 million grant also funds the construction of a business incubator.

Revolving Loan Funds

Beacon Council

EDA provided the Beacon Council with \$2 million to establish a revolving fund to help businesses in Dade County recover after Hurricane Andrew.

Beacon Council

EDA awarded a \$1.5 million recapitalization of their existing revolving loan fund (listed above) to assist businesses in Dade County after Hurricane Andrew.

City of Homestead

EDA provided \$2 million to establish a revolving fund to assist businesses in Homestead after the hurricane.

Miami Capital Development, Inc.

EDA provided \$2 million to establish a revolving fund for business recovery in Dade County after Hurricane Andrew.

Summary

This brief description of funded EDA grants provides an overview of the development priorities after Hurricane Andrew. The rational in funding of 29 projects in 4 categories was to achieve a comprehensive recovery of the disaster area. The sixteen case studies allow us to evaluate the overall strategy of EDA, while comparative analysis of assessed case studies in the Findings and Project Outcomes section of this report allows us to identify key characteristics to project success.

FINDINGS AND PROJECT OUTCOMES

Comparative Analysis and Ranking of Assessed Projects

After a disaster, the Economic Development Administration provides assistance to alleviate the short-term effects of the crisis. It does so cognizant of the larger responsibility with which it has been tasked, to provide assistance that “will achieve long-term economic recovery through a strategic investment of resources and help stimulate growth in economically depressed areas of the United States.” EDA achieves these goals by funding strategically placed projects in and near the disaster affected area.

In the selection process, EDA personnel fund projects according to established criteria, covering both planning and proper filing procedures. Projects must fit into one of four general funding categories:

- planning grants;
- technical assistance/business incubator grants;
- public works/infrastructure grants; and
- revolving loan funds.

Project selection involves more than reviewing the fit between proposed projects and established EDA criteria. The EDA team relies on their many years of professional experience to identify what they consider to be the best projects. EDA personnel also described the project selection process as one that encourages the use of existing networks and the creation of new networks. However, this knowledge has not been codified so that it can be used by future EDA staff who may lack the historical perspective provided by many years with the organization.

An important consideration in the evaluation process, therefore, was to identify the

characteristics of EDA-funded projects that contribute to their success and describe the ways in which EDA functions as a networking organization.

In this section, the evaluation team describes six criteria on which the case studies are ranked. Successful projects are compared with average and unsuccessful projects by ranking them according to the six criteria. Guidelines for selecting post-disaster projects in the wake of future disaster events are provided. Identified criteria are then translated into recommendations that can be useful in improving and standardizing the EDA post-disaster response strategy.

Finally, the work of EDA is analyzed by five characteristics that mark networking organizations: unifying purpose (shared purpose and commitment); independent members; multiple leaders; integrated levels; and voluntary links (Lipnack and Stamps, *The Age of the Network: Organizing Principles for the 21st Century*, 1995). The case studies are arrayed using these characteristics to show how the selection of individual projects contributes to the formation of networks of institutions supporting economic development in a region crippled by a natural disaster.

Criteria for Project Selection

EDA uses four criteria to select projects and rates a project successful when it

- results in job creation;
- leverages additional funding;
- creates economic partnerships; and
- empowers the stakeholders.

The evaluation identified two additional criteria against which projects are measured: effective leadership and effective progress. These

benchmarks of success are described below, beginning with leadership and progress.

Project Success Criteria

Benchmarks of success are as follows:

■ **Effective Leadership**

There are many interpretations and definitions of leadership in the social sciences. These interpretations are conditioned by the particular discipline of the writer, whether it is in sociology, anthropology, political science, or some other discipline. For the purposes of this study, an effective leader is viewed as accomplishing the following:

- articulates a vision on what project goals can be accomplished;
- maximizes the availability of resources for the organization or community being represented;
- maintains good communication between clients and the organization, shares information on how to achieve project goals;
- achieves the goals of a project within a time frame that maximizes the potential project benefits; and
- shares the responsibility with followers for achieving the goals.

The principal goals for leaders under the EDA projects are economic. The success of leadership is found in the realization of those goals for client communities, organizations, and individuals. Not all of the above criteria necessarily apply for the leader of any particular project. In some cases these characteristics were not observable or have not been realized.

Effective leadership was measured using one or more of the following:

- experience in a leadership position,

- experience in the type of activity demanded by the project, and
- demonstrated effective progress under the tenure of the leader in question.

For example, the project leader for Goodwill Industries had 13 years experience as president of the organization when Goodwill received the EDA grant. He proved to be highly effective at maximizing the benefits of EDA building renovation funds through the use of refurbished building materials. His thrift allowed Goodwill to improve facilities beyond expectations. Effective leadership was also reflected in the job satisfaction of Goodwill employees, and by the success of Goodwill in delivering quality products to the Department of Defense. The leader's effective planning and organization also resulted in a 13-year contract providing \$7 million in renovations and a 13-year contract in the *Miami Herald* for doing Sunday inserts. This increased both jobs and working capital for the organization.

An example of less effective leadership is the Miccosukee water project. The original tribal planner, who was responsible for EDA project management, was unable to bring about the start-up of the EDA project. As a consequence, this delayed other construction, such as housing, that depended on the EDA water project. Unfortunately, project management was not directly in the hands of either the tribal or religious council, the two primary decision making bodies for the community. The present tribal planner, however, has been much more active in getting the EDA project going. We predict that this project's progress will increase significantly over the next year due to this change in leadership.

Other projects may be delayed by administrative changes, changes in project design, changes in building codes, or other factors. In these cases, effective leadership is demonstrated by adaptation to project delays through modification of project design or completion timetable. The two projects

in Hialeah (the Farmers Market and the Industrial Teaching Factory) were both delayed because of the election of a new mayor and the decision to assess more critically the market conditions and economic impact of the projects.

These delays have allowed significant improvements in design and leveraged partnerships. The industrial teaching factory is linked with Fraunhofer—a German-based firm having 50 similar factories throughout Germany. Affiliating with Fraunhofer should improve the effectiveness of the project in developing local industry because of the technical assistance they provide. A marketing feasibility study conducted for the Farmers Market provided important consumer information on the market. In both cases, the City Manager played a crucial leadership role, under a changing city administration, by keeping the projects on track and improving the ultimate prospects of project success by developing partnerships.

■ **Effective Progress**

Effective progress is demonstrated by projects that flexibly adapt to changing circumstances so as to move towards project objectives, even if this requires shifts in the original project timeline. Delays in project completion may be beneficial when they are due to improvements in project design or leveraging of secondary resources. However, timing can influence accrued project benefits. Projects that do not maximize the timing impact of primary (EDA) or leveraged secondary resources do not demonstrate effective progress. For example, a public works project that is delayed solely because of inaction by a project manager, will not be as beneficial as a completed project that is delivering benefits to the community. This does not necessarily mean that all projects that fall behind schedule would be certified as not making effective progress.

Effective progress is measured by determining if the project had been initiated at the time of this assessment, and how close the project was to completion. Projects can be ranked as follows:

- *outstanding*—projects that were already completed and demonstrating benefits beyond expectations;
- *excellent*—projects that have been completed and delivered benefits as expected;
- *good*—projects in progress, or development delays were due to improvements in design or through leveraging efforts;
- *fair*—projects that have just started or will start soon; and
- *poor*—projects that have shown no progress, and with which there is no clear schedule of when they will begin or be completed.

A project that has achieved *outstanding* effective progress is the Homestead Commercial Water and Sewer Project. This project was completed on time, and has been leveraged into significant outside funding in the construction of the Homestead Industrial Complex and Motorsports Complex. This infrastructure provides significant employment, capital, and tax benefits to the City of Homestead. Construction on both projects is complete, and hundreds of permanent jobs have been created for local residents. The Homestead Motorsports Complex inaugural race, held on the weekend of November 3–5, 1995, was attended by over 60,000 people, and was nationally televised on CBS.

Local businesses that benefited from the event included gas stations, restaurants, local ice and paper product suppliers, and fresh produce and snack food distributors. Dade County initially committed \$11 million to assist on-site improvements to the motor sports complex that have allowed it to be designed as a state-of-the-art facility.

A major marketing campaign has also begun, using such sources as *Business Week* and the *Wall Street Journal*. A recent full-page advertisement in the *Journal* is designed to promote the Motorsports Complex, South Dade County, and Homestead. This includes sports packages that include tours of the downtown Homestead antiques and business shop area for race fans and their families. The campaign also includes a 30-second TV commercial under production with the donated race car of Ralph Sanchez that consists of a tour of the Homestead Motorsports complex and community from "behind the hood."

A project that has not achieved effective progress is the Center for Health Technologies (CHT). The original contract agreement was for a structure near the Hospital and Medical Complex in downtown Miami. This failed when the city did not provide sufficient financial backing for CHT to lease a building adjacent to the Medical Complex in downtown Miami. The search for a new building resulted in an attempt to transfer the business incubator to a complex of the University of Miami. CHT was trying to negotiate a 20-year lease with UM, but this also failed. The CHT project has recently been proposed for termination.

■ **Job Creation**

Job creation is measured against the number of jobs predicted and the number created. A project that creates jobs at or above predicted levels is considered successful. For some projects, exact numbers of jobs are not predicted in the project description. Job creation as a criterion does not directly apply to planning grants or technical assistance grants because they are not designed to directly create jobs. However, job creation is certainly a secondary outcome of such grants. It is not within the scope and resources of this research assessment to accurately measure job creation of planning grants.

Job creation occurs when new businesses are created or old businesses are revitalized. Examples of projects that are providing sustainable employment at or above predicted levels include Tools for Change, Goodwill Industries, and Florida City Commercial Water. Each of these projects has created jobs above expectations.

Tools for Change has created or maintained jobs by providing technical assistance to 140 businesses, and in the process secured over \$16 million in loans. This was accomplished by careful utilization of \$550,000 in EDA funds to pay the salaries of technical assistance staff of the Tools for Change office. Technical assistance provided by the Tools for Change team allowed clients to upgrade operations, hire new employees, or start new businesses.

On average, each of the 140 businesses counseled has generated 3 jobs, for a total of at least 420 jobs. Jobs are generated by business owners hiring new employees, and by the businesses owners themselves being able to sustain their businesses. Most of those receiving assistance were ethnic minorities that traditionally have a difficult time securing loans or improving existing business operations without outside assistance.

The Goodwill Industries project directly generated 300 jobs in its first two years of existence, not including an additional 150 jobs due to the leveraged contract with the *Miami Herald*. It is predicted that the project will also place 1,200 individuals in the garment manufacturing sector over the next 8 years.

Homestead Motorsports provides employment for 300–400 individuals during events and 15 full-time employees. There are two driver training schools on site with a total of seven employees. One school uses race cars for training drivers while the other specializes in training security and government agencies in high speed chase vehicles. The track is also rented out on a daily basis to

racing teams for engine testing and practice. The City of Homestead estimates that the Motorsports Complex and Industrial Park, when fully developed over the next decade, will provide 12,000 jobs for workers displaced as a result of Hurricane Andrew. The City Manager claims that local residents will be favored in hiring for these jobs.

The Homestead Industrial Park is also generating jobs. Initially, a total of 14 companies expressed interest in the industrial park. These companies have the potential to employ over 2,500 workers. The ultimate goal is to support about 20 jobs per acre on the 280-acre site. This would result in a maximum total of 5,600 jobs in the industrial complex. Presently, effective progress has translated into employment for over 300 people.

Businesses that are already operating in the park or that have firm commitments to locate there include

- Contender Boats employing 100 (not including secondary parts suppliers having an on-site presence), with a 5-year employment projection of 280;
- Guanmard Scientific—a firm that supplies medical training devices to the United Nations—to employ 70 persons;
- Silver Eagle Beer Distributors, to employ 105; and
- Anderson Walls—a construction firm with 35 employees.

Other signs of job creation include pending contracts with Motorola. Motorola hopes to bring in two companies to provide captive suppliers with high-quality subcomponents. This is termed a “suppliers integration program” and is designed to help smaller companies get established.

Not all job creation plans are on schedule, or have had the desired impact. For example, changes in project design, and administration for the Hialeah

Farmers Market and the Industrial Teaching Factory have delayed the job creation potential of these projects.

Job creation is negatively impacted when projects are delayed or lie dormant, or when they are terminated. The Center for Health Technologies project, which would have provided jobs in a health industries incubator, was unsuccessful and proposed for termination. It initially failed because of lack of support from the City of Miami for the primary site and the inability to secure a favorable lease for a secondary site owned by the University of Miami.

The Dixie Highway commercial water line construction is an example of a project that created temporary construction jobs, but had a negative impact on some of the jobs and businesses of the present client population. Due to the months of construction activity, businesses lost customers and job creation potential.

■ **Leveraging Secondary Resources**

The multiplication of EDA funds into secondary sources of funding or alternate resources (e.g., donated structures, technical assistance) is the mark of an outstanding project. By this measure, an unsuccessful project would be one that managed to leverage no additional resources or actually lost resource value. Loss in value could be due to inflation effects accrued as the result of lengthy project delays or legally mandated changes in project design (e.g., post-disaster changes in building codes). The degree of leveraging varies and can only be compared on a project-by-project basis using the initial investment as a baseline.

Examples of highly successful leveraging of resources occurred with the Goodwill project, the Hialeah Industrial Teaching factory (HITPIC) project, and the Homestead Motorsports Complex.

For all these cases, the initial EDA investment acted as a trigger in securing leveraged resources.

Goodwill expanded their military garment contract as a result of the EDA renovations. This allowed the project managers to attain a high level of productivity and quality control. The owner of the *Miami Herald* was very impressed with the productivity and quality control demonstrated in the military garment operation. According to the Goodwill president, it was this positive impression that led to a 13-year contract for newspaper inserts with the *Miami Herald*, including 150 new jobs and \$7 million in associated renovations and equipment installation.

EDA funds were the trigger for Coulter Industries to donate a structure to the City of Hialeah for the HITPIC (teaching factory) project. Without the EDA funds in place, the donation would not have occurred, and Fraunhofer, the German Industrial firm, would not have contracted with Hialeah for the teaching factory.

Cases where leveraging has been less than successful include the projects on the Miccosukee and Seminole reservations. For these projects, delays have produced no additional leveraging. Research into the dynamics of tribal action and past federal assistance suggests that differences between Native American cultural precepts and agency expectations has occasionally led to conflict over goals and expectations (Jessel 1995). While no such conflicts were reported to exist between EDA staff and tribal authorities, the overall context of relationships with the government led to delays.

■ **Creating Partnerships**

As we have noted, partnerships are the building blocks of post-disaster recovery. The creation of partnerships is one of the key ways EDA endeavors to foster sustainable economic development in the aftermath of a disaster event. Partnerships

consist of sustained cooperation between two or more organizations for the purpose of fostering planned economic development. Partnerships grow out of a process of networking, where potential partners are identified and common interests explored and developed.

In South Dade, there was a notable absence of regional networking and planned partnerships. Development occurred in a somewhat haphazard fashion. Ironically, Hurricane Andrew provided a respite to development stakeholders that allowed them to assess the direction and magnitude of development. It allowed them to realign development efforts to maximize networking and subsequent partnerships. EDA was closely involved in providing advice and technical assistance at this critical juncture. As a result, EDA regional staff were included as participants and expert consultants in many of the development plans that came out of the recovery process.

Partnerships can be local, regional, national, and even international. For example, a variety of partnerships have national and international elements. Projects such as the Goodwill Industries, the Hialeah Farmers Market, the Hialeah HITPIC project, the South Florida Regional Planning Council, the Greater Miami Convention and Visitors Bureau, and Tools for Change all have linkages that extend beyond the region. These are outcomes of the EDA planning process and are also the result of multiplier effects from the original investment of funds.

The Executive Director of the South Florida Regional Planning Commission has stated that EDA fostered the connections necessary to develop a sustained network of activities. EDA worked with the planning commission to cooperatively identify the areas of development that needed to be fostered. The goal was to help organizations develop a regional perspective in order to access partnerships and networks to help them grow and develop.

The South Florida Regional Planning Council has used EDA funds to promote partnerships through a variety of development activities. They have brought together a range of organizations and economic agencies in seminars and planning sessions to develop a common vision for development in the region. These included the State of Florida's Matchmaker Business Conference, which provided information to 500–600 attending businesses on how to network with federal, state, and local government agencies as well as the private-sector. Almost 5,000 public- and private-sector organizations received the First Annual Economic Development Resource Directory, which provides contact names and other resource information on organizations that provide assistance to support the South Florida Regional Economy.

Tools for Change has established at least 16 partnerships while assisting in a wide range of development projects. Partnerships have been created with community-based organizations, social service agencies, and other educational and economic partners in the South Dade area. The "Incubator Without Walls" is an example of partnership building fostered by Tools for Change. It involves the Haitian Organization for Women and Metro Dade Community College (MDCC) Homestead Campus. This partnership will provide a space for formerly homebound minority businesses to establish themselves in the wider business community.

Projects that rank average to poor on creation of partnerships include the Homestead revolving loan fund, the Hialeah Farmers Market, and the Seminole Historic Village and infrastructure project.

The Seminole project has not yet been started, and has thus realized no partnership development. The Homestead revolving loan fund was delayed in start-up because of changes in project managers. Partnerships are just now starting to

develop as the initial loans are having an economic impact. However, the original population of low-income clients has been replaced by established business concerns seeking to expand their operations.

The Hialeah Farmers Market is ranked as "average" because it is just now under construction. There hasn't been the opportunity to create the business partnerships that would exist with a fully operational market. It is linked to a major international importer of tropical fruits, whose business is on land adjacent to the market site. Market construction has encouraged this local merchant to expand his business. The market will also be tied to local produce suppliers in South Dade at the rail connection that passes through the market.

■ **Stakeholder Empowerment**

Stakeholder empowerment directly measures how effectively projects benefit community members by engaging them in project development and decision making or providing them with jobs, technical assistance, or public services. All projects are intended to have community-level benefits (i.e., to promote the economic development of communities). This is most direct when community beneficiaries are involved in project planning and development.

Stakeholder empowerment is indirect for those projects that provide infrastructure improvements or economic planning. Projects in progress are measured by their potential for stakeholder empowerment. Stakeholders vary for each project but are identified as those who receive direct or indirect benefits. Projects ranking high on stakeholder empowerment include Tools for Change, Goodwill, Florida City Commercial Water, and the MetroZoo.

The MetroZoo is a major recreational resource and tourist destination for South Dade whose

stakeholders include zoo patrons, the Zoological Society, employees, service contractors, and suppliers. The effective use of EDA resources in zoo infrastructure repair was instrumental in its rapid reopening four months after the hurricane. Stakeholders such as the Zoological Society and the annual zoo membership actively participated in the zoo recovery process by volunteering time and resources to the zoo reconstruction process. Local residents used the zoo as a frequent alternate recreational destination from the more distant beaches and sites of greater Miami.

Florida City Commercial Water empowered a wide variety of stakeholders, including the local Farmers Market, the Keys Mall, and at least 10 other planned or built businesses. Empowerment was a part of the planning process when local businesses were given voice in deciding which areas of the city should receive the commercial water line service. Those whose businesses will attach to the line benefit most directly from the project. Examples of the indirect impact of the water line infrastructure includes jobs in the various mall shops and fresh produce from the Farmers Market.

Goodwill empowers its clients—its employees—by the jobs it has created, but also by giving them an elevated sense of self-esteem. This is critical because many clients suffer not only from physical or mental disabilities, but also from chronic depression. Work supervisors tolerate behavioral abnormalities that in other settings would result in loss of employment. Empowerment also comes from the satisfaction in earning a steady wage and being taken off welfare and other social support services. The needs and priorities of disabled workers were taken into consideration when a recreation and music room were incorporated into the project design.

The Homestead revolving loan fund was originally intended to empower small minority-owned businesses in the southwest corner of Homestead.

Lack of experience in managing a revolving loan fund, clients' difficulties in preparing complicated business plans, and a 15-page application, and poor communication with the target population hampered the initial efforts. After considerable delays and several changes in project managers, the original goal was eventually abandoned. Loans are now being made to clients who have well-defined business plans and the potential for significant job development.

Projects that remain incomplete, or have been terminated, rank lowest in stakeholder empowerment. In cases where projects are delayed, there is a loss of immediate stakeholder opportunity from planned jobs, public services, or technical assistance. This is the case in the Seminole historic village project. Nothing has been done as of this date, and there is no set schedule for the project.

There is also the risk that extended delays may result in the termination of a project, giving no return to stakeholders (e.g., CHT). There are two negative effects here: (1) the loss of project benefits for the original stakeholder and (2) the loss of valuable time before funds are reprogrammed.

Ranking of Case Studies

Case studies can be assessed using the six criteria for project success. Not all criteria are appropriate to all projects. For example, job creation is not a primary goal of a planning grant. However, it is expected to be the outcome of the successful *application* of the resulting economic development plan.

Case studies are assessed both within the four categories of projects and compared across them. It is important to note that the assessment of these case studies is for one point in time along a 5-year continuum. *Five years is the maximum allowable time for the completion (or total utilization of*

earmarked EDA funds towards completion) of any EDA post-disaster assistance project.

Projects that are unsuccessful now may in fact be very successful in the future. They may also not improve significantly in the future, and if the 5-year time period runs out, they may be terminated. Those that are presently successful are assumed to be economically sustainable. Table 1 ranks the projects across the six criteria, with a 1 = lowest ranking and 5 = highest ranking. Values can range from a low of 0.2 (that is, all rated 1 – “poor” across all applicable categories) to a high

Development Quotient: The measure of the overall development impact of a post-disaster assistance project using the criteria of effective leadership, effective progress, job creation, leveraging secondary resources, creating partnerships, and stakeholder empowerment.

of 1.0 (rated 5 – “outstanding” across all applicable categories).

Table 1 — Comparative Development Quotients for the Assessed Case Studies

Project	Leadership	Progress	Jobs	Leveraging	Partnerships	Empowerment	Total	Development Quotients
Planning Projects								
1 SFRPC	5	5	NA	3	5	5	23	.92
2 GMCVB	4	5	NA	NA	5	4	18	.90
Public Works/Infrastructure Projects								
3 Florida City Water	4	5	5	5	4	4	27	.90
4 Hialeah Farmers	4	3	3	3	3	3	19	.63
5 MetroZoo	5	4	4	5	4	4	26	.87
6 Homestead Water	4	5	4	5	5	5	28	.93
7 Dixie Highway	3	3	2	4	2	2	16	.53
8 Miccosukee	2	2	2	2	2	1	11	.36
9 Seminole	2	1	1	1	1	1	7	.23
Technical Assistance/Business Incubator Projects								
10 Goodwill	5	5	5	5	5	5	30	1.0
11 Tools for Change	5	5	5	5	5	5	30	1.0
12 HITPIC	4	3	3	5	4	3	22	.73
13 CHT	3	1	1	3	5	1	14	.47
14 FIU	4	5	NA	3	4	4	20	.80
Revolving Loan Funds								
15 Homestead RLF	2	3	2	NA	3	3	13	.52
16 Beacon Council	3	3	3	NA	4	2	18	.72

Scores can be interpreted as follows:

- 5 = outstanding — well above expectations at this point
- 4 = excellent — above expectations at this point
- 3 = good — about as expected at this point
- 2 = fair — somewhat below expected at this point
- 1 = poor — below expected at this point
- NA = not applicable

Source: EDA Assessment Data

■ **Analysis of Project Rankings**

An average development quotient (DQ) (with all criteria ranked as “3”) is .60. This represents a value at which the project is “about as expected at this point” across all applicable criteria. A DQ below .60 would indicate the project development is less than expected at this point. Any score above .60 indicates a project that is above expectations for this point. Overall, project DQs presently range from a high of 1.0 to a low of .23

As shown in Table 1, 11 out of 16 projects (69% of the sample) are exceeding expectations (above .60). For these projects alone, values range from .63 to 1.0. The average score for this group is very high (.84). This indicates that most of the sixteen projects were well chosen, and have accomplished much of what was planned for by EDA (e.g., created partnerships and jobs and leveraged additional funds).

Five projects have DQs less than .60, indicating they are not meeting their expectations. Development quotients for this “below expected” category range from .23 to .53. The average DQ for this category is .42, which is well below the “expected” value of .60.²

Projects that lie close to the .60 mark (just above or below it) can be characterized as “average.” These include the Dixie Highway commercial water project (.53), the Homestead Revolving Loan Fund (.52), the Hialeah Farmers Market (.63), and the Beacon Council (.60). All four of these scores are anticipated to rise as the impacts of these projects show effective progress. *It must be emphasized that projects are evaluated at a single point in time, and lower than average scores are not necessarily a reflection of any project’s future potential.*

²These values are the product of this analysis, and do not represent any preconceived rankings or means of comparison generated by EDA.

We can also analyze project averages across the six criteria (see Table 2). These scores are derived from a simple average of the five-point scale for each criterion. Projects score highest on creating partnerships, effective leadership, leveraging resources and effective progress. Job creation and stakeholder empowerment do not score as high. This indicated that the benefits of the projects are still being realized, and there are significant project impacts to be realized in the near future.

**Table 2 —
Average Scores of Projects Across Criteria**

Criterion	Average Development Quotient
Effective Progress	3.8
Leveraging Resources	3.8
Effective Leadership	3.7
Creating Partnerships	3.7
Stakeholder Empowerment	3.4
Job Creation	3.0

Source: EDA Assessment Data

■ **Analysis of Projects by Levels of Expenditures**

Funding of any post-disaster project entails some degree of risk. Projects can fail, or not meet their expectations, resulting in lost development opportunity. The rigorous selection process used by EDA is designed to minimize risk and maximize benefit. However, it is not possible to eliminate all risk or to predict, with certainty, how particular projects may score across the development quotient indicators or how they may turn out after construction is completed.

Another way to measure comparative success is to compare projects across the four EDA categories (see Table 3). If the majority of funds were expended on highly successful projects (projects with high DQs), then we can conclude that, overall, projects were well selected and collec-

tively should lead to effective post-disaster recovery.

Table 3 — Comparative Expenditures and Development Quotients for the Assessed Case Studies

Project	Expenditures	Average Development Quotient
Planning Projects		
SFRPC	\$2,000,000	.82
GMCVB	\$1,000,000	.90
Project Average	\$1,500,000	.86
Public Works/Infrastructure Projects		
Florida City Water	\$5,000,000	.90
Hialeah Farmers	\$1,500,000	.63
MetroZoo	\$4,500,000	.87
Homestead Water	\$7,000,000	.93
Dixie Highway	\$5,000,000	.53
Miccosukee	\$1,000,000	.36
Seminoles	\$1,000,000	.23
Project Average	\$3,571,000	.64
Technical Assistance/Business Incubator Projects		
Goodwill	\$1,500,000	1.0
Tools for Change	\$550,000	1.0
HITPIC	\$1,000,000	.73
CHT	\$1,000,000	.47
FIU	\$250,000	.80
Project Average	\$825,000	.88
Revolving Loan Funds Projects		
Homestead RLF	\$2,000,000	.52
Beacon Council	\$3,500,000	.72
Project Average	\$2,750,000	.62
Source: EDA Project Briefs		

The total expenditures for analyzed case studies was \$36.8 million, which represents 74 percent of the total of funds expended for all 30 projects.³

³The \$3.5 million for the Beacon Council project represent two projects in one, with two separate disbursements of \$2.0 million and \$1.5 million, respectively.

The following results are obtained:

- For those projects with DQs at .60 or above, total expenditures amounted to \$27.8 million, or 76 percent of the total sample.
- Projects with DQs below .60 represent \$9.0 million of the total, or 24 percent of the total sample.

Thus, over three-fourths of the funds in the sample (76%) were expended on projects that are rated as *above expected development levels*. The average expenditure for projects at or above .60 was \$2.5 million, and for those below .60 was \$2.0 million.

If we compare the average expenditures with Development Quotients by project category, we get a perspective on cost-benefits by category types (Table 3).

Characteristics of a Networking Organization

One important factor contributing to the success of EDA's disaster response is its ability to support existing networks and develop new ones to produce far-reaching economic development in a region. It is not by chance that EDA is successful in forming partnerships and networks. EDA's strategy parallels that used by other successful networking organizations. A recent book⁴ describes this strategy of creating "voluntary links among independent members" (i.e. networking as the organizing principle for the 21st century). The authors conclude that five characteristics mark the successful networking organization:

- Unifying Purpose (shared purpose and commitment);
- Voluntary Links;

⁴*The Age of the Network: Organizing Principles for the 21st Century*. Lipnack and Stamps. 1995.

- Independent Members;
- Multiple Leaders; and
- Integrated Levels.

The following discussion will show how EDA's intervention into the crisis situation created by Hurricane Andrew embodied these five characteristics. A short definition of each term is provided, followed by a discussion of the way in which EDA's response manifested the characteristic. Examples from the case studies will be used to illustrate the discussion.

■ **Unifying Purpose**

"A shared commitment to the same goal..."

EDA's mission statement provides the unifying purpose for its disaster intervention work. It states that EDA's function is "to achieve long-term economic recovery through a strategic investment of resources and help stimulate growth in economically depressed areas of the United States." The mission statement clarifies EDA's role as targeted assistance with a long-term goal, thus separating it from the short-term, urgent humanitarian assistance programs. Finally, it defines the parameters for allocating funds to only some of the many projects requesting assistance. In keeping with its purpose, EDA recognizes that a disaster destroys the status quo and provides an opportunity not only to repair and restore damaged areas but to improve, change, and stimulate economic growth in new directions.

EDA staff, with years of experience in the field, have the expertise to identify the chronic economic problems of a region. They are skilled at (1) providing rapid economic and social analysis that undergirds their funding decisions; and (2) sharing this information with the region's stakeholders as a basis for decision-making. Thus, EDA work began with an evaluation of the

economic landscape to carefully assess the needs of the impacted economy both in the

- *short-term*—to develop strategies for economic recovery from Hurricane Andrew; and
- *long-term*—to stimulate economic growth.

The underutilized potential of the South Florida area impacted by the hurricane for tourism was quickly recognized. The impacted area had not been a significant part of the attractions publicized by the Greater Miami Convention and Visitors Bureau (GMCVB) prior to Andrew Hurricane. EDA and the region's stakeholders acknowledged the importance of strengthening the link between the regions. The potential for international trade, especially with Latin America, was also acknowledged as critical for the economic future of the area.

Contributing to the networking process was the ability of the EDA staff to build consensus around *a set of economic goals* by meeting with community leaders, regional planners, and other development leaders. The outcome of EDA's activity, then, is not just a series of discrete EDA-funded projects, but an institutional network which contributes to the overall economic recovery of a region.

Two factors were common to all EDA-funded projects in South Florida. Each had the potential to *improve or change* a past economic situation that was inadequate and each contributed to the long-range economic goals being established. The selection criteria for EDA-funded projects are derived from its mission statement, so that funded projects contribute to accomplishing EDA's mission by simultaneously addressing the immediate crisis and correcting underlying systemic problems. Throughout the project selection process, EDA identified and selected organizations which share the purpose and can contribute to achieving it through their own work.

derived from its mission statement, so that funded projects contribute to accomplishing EDA's mission by simultaneously addressing the immediate crisis and correcting underlying systemic problems. Throughout the project selection process, EDA identified and selected organizations which share the purpose and can contribute to achieving it through their own work. Further, by putting conditions on funding, EDA inspired organizations not accustomed to working together to cooperate to achieve the common goal: long-term economic development.

The grant to the MetroZoo refurbished a major tourist attraction by repairing the damaged infrastructure. The grant also provided resources for the zoo to construct a new educational court which will bring in national resources from the Smithsonian Institution. The grant to the Hialeah City government supported the development of a Farmers Market which will become a major tourist draw, attracting visitors, regional tourists as well as international visitors to the Miami region. Market links for agricultural products have been created, for Dade County suppliers of produce, from regional consumers from Broward and Palm Beach to international produce suppliers.

The planning grant to the GMCVB was specifically aimed at *revitalizing tourism* and retaining the domestic market, which represented 50 percent of the annual visitors who utilized the recreational sites of Miami. The GMCVB developed several products, such as a promotional video, a rack brochure and national media campaigns and other related market activities to show "We're up and operational. We're ready to receive you." This national campaign benefitted all the members of the network who were committed to economic development and by extension, benefitted the residents in the area.

The grant to Goodwill Industries resulted in 300 jobs for displaced workers (short-term employ-

ment replacement), but also resulted in upgraded facilities, as the old sewing machines destroyed in the hurricane were replaced by high technology equipment (long-term expansion). Homestead, which lost 85 percent of its buildings, received a grant to repair the damaged water and sewer lines and roads (immediate restoration of water). As a result, the infrastructure and capacity were substantially improved. The Homestead Motorsports Complex, a new attraction for South Florida, the Industrial Park, and the Free Trade Zone were built, providing hundreds of additional permanent jobs.

In the process, EDA became a communication node on economic development issues, attracting others who are also concerned about economic development in the region. EDA staff provided information about similar reactions in other disasters and about resources available outside the area. They connected partners who might not have worked together prior to EDA's involvement or who in the past were isolated from the communication network for one reason or another.

■ **Voluntary Links**

"Members have many links—expansive relationships among people and extensive connections through technology. Organizations communicate extensively and meet often. No one is forced to participate. There are many crisscrossing relationships." (p. 84)

Prior to Hurricane Andrew, South Florida was characterized by a lack of coordination in many aspects of regional development. EDA's activities substantially increased the links among the stakeholders in economic and social development.

During the grants proposal phase, many organizations were encouraged by EDA to communicate with each other and cooperate to avoid duplication. This encouraged links among local

increased their work with the local country governments, especially with the Broward County government planners. They have also expanded their contacts with foreign governments, establishing international clients from Japan and Canada. For example, an international forum with Southeast Asia also grew out of the planning grant.

The SFRPC sponsored a one-year strategic planning process, *Vision 2025*, for Southeast Florida, including Broward, Palm Beach, Dade, and Monroe Counties. A large number of community-based meetings were held involving hundreds of citizens and a wide range of organizations, public and private. Many of the EDA grantees were included in this community-building process. A comprehensive written plan for the region around the areas of health, law enforcement, and education was prepared at the conclusion of the year.

EDA project staff were present at the initial meetings held by the SFRPC. New alliances were created between business and community leaders during these meetings. Established patterns of dominance were broken, leaving the opportunity for new organizations to find a voice.

■ **Independent Members**

"Each company/organization is different. Each retains its independence while cooperating with others on specific projects." p. 83

The organizations and institutions with which the EDA interacted during the post-Andrew period are viable, self-sustaining organizations with missions defined independently of their relationship with EDA. Indeed, each came to the EDA with a specific proposal that would allow them to extend their services to their specific client base during the crisis period.

In the South Florida region, the degree of participation of each organization in the network

was variable. It appears that EDA's assistance, through training, technical assistance, and funding, enhanced grantees' participation.

■ **Multiple Leaders**

"Different people and companies lead, depending on what needs to be done. During any given process, more than one person leads." p.84

EDA chose projects for funding which had demonstrated evidence of capable leadership, a characteristic which the evaluators identified as contributing to the success of a project. Thus, in the institutional network for economic development, no one individual or organization held sole responsibility. Evaluators identified multiple leaders within any one project and at times, more than one individual was making decisions and accepting responsibility for the outcome of the project.

■ **Integrated Levels**

"Involve the hierarchy." (p. 87)

An analysis of the types of organizations included in EDA's work in South Florida reveals a rich diversity of groups working at all levels. This interaction among the levels stimulated all members by providing new ideas from national and regional organizations. The presence of EDA also provided opportunities for national organizations, like Habitat for Humanity, to offer their services to communities in which they had not previously had access.

EDA drew together *national level* organizations, like Goodwill Industries to work with *regional groups*, like the SFRPC, Beacon Council and MetroZoos. *Local level* governments sponsored infrastructure projects, as in Florida City, Hialeah, and Homestead.

By choosing the projects based on long-term economic goals, EDA-funded activities support the development of a holistic economic recovery plan. The plan maximizes the participation of the stakeholder groups in a network of institutions. In South Florida, this resulted in effective institutional networks working for sustainable economic development.

Thus, the concept of achieving goals *by funding strategically placed projects to create a network of inter-related institutions*, applies equally to the type of organization.

Realizing the "Phoenix Effect"

The projects funded by EDA in the aftermath of Hurricane Andrew reflected local economic recovery strategies that were highly varied in their composition and impacts. To better understand local strategies and projects selected, we suggest the term "Phoenix Effect" as a unifying concept that allows us to assess the EDA project outcomes. The Phoenix Effect is defined as "a sustainable improvement in the social and economic condition of a community or organization arising from the strategic investment of capital resources after a disaster event" (Dyer 1995). To achieve this effect, the projects chosen for funding must provide long-term social and economic benefits that have the potential to rebuild and restructure the local economy in ways that, prior to the disaster, might not have happened as quickly or at all.

The "Phoenix Effect" is not an explicit goal or mandate of EDA funding, but it may occur serendipitously if the project planning process identifies key areas of strategic investment. EDA supports projects that have long-term impact potential and that are good candidates for the leveraging of development funds from other public- and private-sector sources. Therefore, the initial EDA investment may act as an economic trigger to achieve results that might not have

The Phoenix Effect

A sustainable improvement in the social and economic condition of a community or organization arising from the strategic investment of capital resources after a disaster event.

otherwise been reached in the post-disaster climate. Unlike agencies mandated to restore communities to their pre-disaster condition, EDA can look for opportunities to improve in a sustainable way on what existed prior to the disaster.

Summary

Reviewed case studies fell into a continuum of success, with nearly 80 percent at or above expectations.

The use of the six criteria has allowed us to assess and compare success across the four different project categories. Overall, the development quotients indicate that project selection has been good, and projects are achieving what was anticipated. For outstanding projects, good leadership and effective leveraging of resources have resulted in benefits which far surpass the original project design. For some "average" rated projects (e.g., HITPIC), outstanding benefits are anticipated but not yet realized.

It would not be expected that all projects would be equally successful. In a post-disaster environment it is difficult to predict the long-term development trends of a particular region. Risk is increased by accelerated change in the economic and political landscape, including demographic shifts, loss of businesses, and shifts in labor skills/needs, economic priorities, and employment patterns.

In a post-disaster environment it is difficult to predict...the long-term development trends of a particular region...In the post-disaster state, risk is increased by accelerated change in the economic and political landscape...

Careful planning and review of potential projects is critical to recovery in a post-disaster environment. We also conclude that a critical element to project success is effective leadership. None of those projects with below average DQs

(.60) rate high (4 or 5) on effective leadership (see Table 1). Effective leadership is difficult to identify when a project is just a plan on paper. EDA staff must weigh the experience and past performance of project managers against the potential of projects to contribute to post-disaster recovery. Effective leadership is *also crucial* for maximizing stakeholder empowerment. Those projects that demonstrate a high degree of stakeholder empowerment are predicted to be the most sustainable (i.e., to continue to provide benefits for generations into the future).

CONCLUSIONS AND RECOMMENDATIONS

Evaluation of Overall Assistance Approach

This is the final report of the Aguirre International assessment of EDA post-disaster assistance program in the aftermath of Hurricane Andrew. Sixteen projects funded by EDA have been examined in this final report.

The EDA strategy has had a regional impact that will contribute to positive momentum in the economy of the area. The program appears to have been successful in stimulating economic growth which, in some cases, surpasses pre-disaster conditions.

The EDA strategy has had a regional impact that will contribute to positive momentum in the economy of the area. The program appears to have been successful in stimulating economic growth which, in some cases, surpasses pre-disaster conditions. Improvements linked to EDA assistance are primarily reflected in new jobs generated, increased income, small business loans, and taxes. Job training and technical assistance, the renovation of old businesses and the creation of new ones, and the development of economic partnerships and networks are all documented as outcomes of EDA's contribution to post-disaster recovery.

Findings and Conclusions

As a result of the research and field work undertaken as part of this assessment, we draw the following conclusions:

- Natural disasters such as Hurricane Andrew have a negative impact on the economy of an entire region, not just the immediately damaged area. To be most effective, a post-disaster assistance strategy must take a regional approach to economic recovery.
- EDA funded projects that responded to a strategic analysis of the regional economy. They targeted organizations and governmental agencies that were seen to be key components in the recovery process in each of the four principal sectors of the local economy, including agriculture, small business, tourism, and military base-related economic activities.
- EDA's efforts to involve local governments and other entities in a regional strategic planning process acted as a facilitating mechanism or catalyst for recovery that otherwise would not have taken place.
- EDA's selection of certain projects outside the physical impact area was based on a careful assessment of the "shock wave" effect experienced by the regional economy and communities after the disaster event.
- EDA projects were well selected in that they filled a significant recovery need that would not have been funded by any other available source in such a timely fashion.
- The model adopted by EDA of establishing a fully functioning field office, co-located with other disaster recovery agencies, was very effective in maintaining an ongoing dialogue with local officials and potential grantees. This allowed for rapid and direct assessment of the value of proposed projects in the local area.

- The EDA team on-site approach maximized the sustainability of selected projects through continuously available expert assistance and follow-up.
- The cost-effectiveness of EDA funding is demonstrated in the case studies, which show that many millions of dollars of benefits have accrued from project investments.
- The EDA approach to partnership building has resulted in the creation of sustainable economic development networks in the impact area that previously did not exist.
- Local project directors that were recipients of EDA grants express great satisfaction with the efforts of EDA as a disaster recovery agency.
- The sixteen projects (from a total of twenty-nine) reviewed for this assessment fell into a continuum of success, with the majority showing substantial progress and with a few making little or no progress.
- For purposes of comparing relative project success, four characteristics central to EDA's goals were selected for review: job creation; leverage of secondary resources; the creation of economic partnerships; and stakeholder involvement and empowerment. Analysis of the case studies showed two other characteristics to be important for project success: effective leadership and effective progress. A numerical "Development Quotient (DQ)" between 0.2 and 1.0 was devised to quantify project outcomes with respect to these six variables.
- The DQ for the 16 projects reviewed range from a high of 1.0 to a low of 0.23, with an overall average of 0.73.
- The DQ on 11 out of 16 projects (73% of the cases) currently exceeded expectations (i.e., scored above .60, which indicates projects functioning "as expected").
- The average DQ for successful projects (projects above .60) is 0.84. This indicates that these projects were well chosen and have accomplished much of what was planned by EDA.
- Five projects had DQ values that suggest below-average performance.
- While EDA maintains contact with projects after they are approved, the projects that have performed less well suggest that more active post-funding monitoring and follow-up might either provide the projects with helpful guidance in implementation or assist EDA in deciding to terminate non-performing projects.
- It should be noted that since the projects were evaluated at a single point in time, a below-average score is not necessarily a reflection of any project's future potential.
- If the six criteria are examined across all projects reviewed, the highest scores appear in creating partnerships, effective leadership, leveraging resources, and effective progress.
- Scores for job creation and stakeholder empowerment are somewhat lower than other indicators. This may indicate that these aspects of project implementation are still to be realized, and there are significant project impacts to be realized in the near future.
- Those projects that performed as expected or better represent 76 percent of total funding obligated in the projects reviewed, some \$27.8 million.
- Projects with overall DQ scores below .60 (that is, judged by the assessment team to

have a “less than expected” performance status) represent \$9.0 million, or 24 percent, of total funding obligated to the sample.

- A critical element to project success is effective leadership. None of those projects with below average DQ scores (that is, below .60) rate high on leadership.
- The use of the six indicators of project success in the selection of future projects will lower the risk of failure and maximize potential benefits.
- The review of planned projects, and the evaluation of an organization’s ability to manage a project, should include careful consideration of the experience of the grantee project manager in the kind of project proposed.
- Key issues of project design, the establishment of milestones, and project completion should be addressed in the project brief and in grant documents.
- Criteria should be established to better monitor *effective progress* of projects. Projects that do not show effective progress after a midpoint evaluation under the five-year guidelines should be considered for termination, with funds possibly reallocated to projects that have demonstrated effective progress and could benefit from additional funding.

Recommendations

The following recommendations are drawn from the analysis of case studies and the analysis of the EDA approach to disaster assistance:

- EDA should maintain its present team approach in post-disaster recovery, and this approach should be standardized for future post-disaster assistance.
- Since disaster response must be timely, EDA should attempt to secure separate funding for pre-disaster planning and to expand its disaster mitigation initiatives, so that it can respond quickly and effectively when disasters occur. This funding could be requested in a cooperative agreement with other disaster response agencies such as FEMA, HUD, and SBA.
- On-site management of disaster assistance delivery should continue, with a continuity of personnel for the duration of the activity. This establishes trust and confidence among project managers, thus improving the possibility that projects will succeed and show effective progress.
- Based on the relative success of technical projects and technical assistance/planning grants, EDA may want to consider maintaining flexibility in funding in these categories, shifting resources from revolving loan funds and infrastructure projects. The distribution of funding across project categories should not be formulaic, however, but rather should respond to the specific nature of the needs resulting from the disaster.
- Since it has been demonstrated that there is a shock wave effect with significant impacts on the surrounding region, the consideration of funding for projects outside the directly impacted physical area should continue.
- EDA should codify its assessment procedures in order to effectively track the magnitude and direction of project impact on the post-disaster recovery process.

CASE STUDIES

Planning Projects

South Florida Regional Planning Council (and Broward County)

■ *Project Description*

This project will fund a strategic plan for economic development and international trade. It will address sustained post-disaster efforts to revitalize the three-county South Florida Region (Broward, Dade, and Monroe Counties) for increased interaction in the global economic environment and for the ongoing impact of internationalization in the regional economy. The project will promote regional collaboration and facilitate the exchange of information and ideas that will help local governments provide economic opportunities and better serve their diverse, multi-national and ethnic constituencies.

■ *Project Cost*

Two hundred thousand dollars from EDA.

■ *Purpose of the Project*

The project will provide the framework for developing partnerships and collaborative networks throughout the region. Before Hurricane Andrew, the growth in the region served by the SFRPC was not linked to a comprehensive regional plan based on cooperative partnerships among local, state, and regional development agencies. This project was partly designed to create the necessary leadership and focus in order to improve overall economic planning in South Florida.

The project will particularly target international trade and tourism and their relation to business, workforce, and community development. The strategy will include collaboration with the region's Universities Small Business Develop-

ment Centers; The Beacon Council; the Broward Economic Development Council; the Palm Beach Economic Development Board; and the Florida Departments of Commerce, Labor, and Employment Security.

Project activities such as workshops, conferences, and regional informational publications and resource directories will be used to assist workforce development, business and tourism development, education and care needs, and increasing demands on local resources such as transportation and information infrastructures, water and environment systems, and emergency planning and response.

■ *Description of the Project Area*

South Florida's economy has historically been linked to tourism and immigration. These forces have influenced a region that is undergoing unprecedented growth, which has put strain on the social and economic planning resources of the region. The recent history of the area reflects a transition to a service economy, with an increasing share of employment in the service sector and a decrease in industrial manufacturing. Increases in service-oriented employment share have occurred in the non-agricultural sector from 77 percent in 1970 to 86 percent in 1990 and it is projected to increase to 88 percent by the year 2005.

In the past decade, the region's international business community has grown in importance and size and now includes many companies from Europe and Asia, along with Latin America and the Caribbean. The region is a destination of choice for many European and Latin American tourists. It is also the region of the country with the largest immigrant population. This international connection is exemplified by the Miami International Airport, where domestic and foreign

carriers serve 24 cities in Europe and the Mideast, 29 cities in South America, 28 in the Caribbean, 10 in Central America, 4 in Mexico, and 4 more in Canada.

More than 300 multinational companies have opened offices in the region. In 1991 alone, \$21.7 billion in was processed through Miami. Based upon these developments, South Florida is evolving into a conduit for international goods and services. The value added to the region's economy is increasingly external. European and Latin countries coverage upon the region to trade among themselves, rather than go directly to the individual countries of South America or the Caribbean. Consequently, South Florida is emerging as the administrative and managerial hub of a large amount of the global market in European-Latin trade.

Before the hurricane, there was no overall regional coordinating agency or international trade strategy to provide an effective partnership in economic development. Greater public/private partnership was needed so that limited government finances and authority could be used to engage other public and private institutions in meeting development needs. This project helps provide the leadership to create development partnerships. It points the way to establishing a comprehensive approach to regional economic development in the international sector.

In order to support the growing role of the region in the world economy, the region's economic base must be broadened and shifted toward higher value-added industries, which have high barriers for the private-sector to initiate. Those barriers include labor force training, infrastructure, technology transfer, and start-up venture capital. To overcome such barriers, it is necessary to take a comprehensive approach to regional economic development. Currently, there is no overall regional coordinating agency or international

trade strategy to provide an effective partnership in economic development. Greater public/private partnership is needed so that limited government finances and authority can be used to engage other public and private institutions in meeting development needs. *This project will help provide the leadership to create development partnerships. It points the way to establishing a comprehensive approach to regional economic development in the international sector.*

■ **Hurricane Impacts in the Project Area**

The damage done by Hurricane Andrew had widespread consequences on the regional economy of South Florida. The damage is still apparent in that economic recovery has not reached certain areas of South Dade, and the social and housing dislocations that occurred after the event are now a permanent part of the economic landscape of the region. One ironic aspect of the disaster event was that it provided economic planners with a respite from a basically unplanned development activity in the region. After the disaster, virtually all economic development ceased for a time. This provided planners with the incentive to evaluate their role in the future direction of economic development. Planning became a priority, and the EDA grant was very opportune in its timing. The disaster and subsequent planning grant from EDA allowed the SFRPC to create the regional partnerships needed to proceed with a comprehensive development plan.

"Partnerships were the most important thing EDA created. They did this not by coming up with their own plans independently, but by going to existing substrate agencies to get help to develop the area."

Executive Director—SFRPC

■ **Project Outcomes**

The \$200,000 planning grant awarded to the SFRPC allowed for the initiation of major economic development initiatives in the South Florida Region, documented by the SFRPC (1995). These included the following:

- The designation of South Florida as an Economic Development District, which enables the South Florida Regional Council to promote and facilitate strategic approaches to regional economic development in the South Florida region. Further, it enhances the Council's ability to promote regional collaboration through partnerships that provide economic opportunity throughout the Region to better serve the Region's diverse communities.
- The creation of a Regional Economic Development Committee (REDC) that provides technical assistance to local governments, businesses, chambers of commerce, economic development councils, and others with economic activities impacting the South Florida region. Using EDA funds, the REDC has undertaken the following initiatives:
 - ▶ The First Annual *Economic Development Resource Directory*, which provides contact names and other resource information on organizations that provide assistance to support the South Florida Regional Economy. Five thousand directories were produced, and most have been distributed to public- and private-sector organizations.
 - ▶ The State of Florida's Matchmaker Business Conference, which provided information to the business communities on how to do business with federal, state, and local governmental agencies and corporate America. Between 500 and 600 businesses attended the conference.

- ▶ The development of an Overall Economic Development Plan (OEDP), which provides strategic goals and policies to guide the Region's economic growth and sustainability.

The initial EDA grant provided development momentum that was leveraged into a \$57,000 technical assistance grant, awarded to the Council in August 1994. This award has furthered the progress made with the original grant with the following economic development initiatives:

- The Southeast Florida 2025 Project, created with special legislation (Florida Bill No. 3062), which calls for the creation of a Steering Committee to conduct a 1-year visioning process for the southeast portion of the State of Florida (Palm Beach, Broward, Dade, and Monroe Counties). The purpose is to create a comprehensive vision of Southeast Florida's future, covering, but not limited to, education, law enforcement, health, and transportation.
- The Council, in conjunction with the California Institute of International Planning Research, received a delegation from Tokyo Shichoson Jichi Chosakai. The purpose of the meeting was to share information with the delegation regarding economic development programs, growth management regulations and strategies, metropolitan comprehensive planning, and other issues affecting the quality of life for both regions. In addition, the Council participated in a workshop with a local law firm in receiving the Deputy President of the Academy of Jurisprudence and the President of the Ministry of Justice of the Russian legal system.
- The Council sponsored the First Annual Broward County Minority Economic Summit and Resource Conference. The purpose of the Summit/Conference was to focus community attention on the issues that inhibit or limit participation by members of minority groups

in the County's economic mainstream. The Summit focused on solutions to problems that need to be addressed by all sectors of the community.

The Executive Director of the SFRPC notes that because of the development activities fostered by the grant, such as those listed above, it has *"expanded employment opportunities for residents within the Region, specifically, those persons displaced by Hurricane Andrew."*

It has also helped solve the problem of a *"lack of regional collaboration and cooperation on common issues."* The SFRPC is now a planning locus for hundreds of businesses and community organizations. For example, the *Economic Development Resource Directory* lists 136 partners in development, including banks, business assistance organizations, county boards of education and special districts, county and municipal governments, economic development councils, chambers and resource centers, employment and job training organizations, federal economic assistance administrations, international agencies, state agencies, and university and college programs.

The Hurricane also represented an opportunity to review development goals and directions: "Things are changing so fast in this part of Florida—and are accelerated even from what was predicted—the hurricane event combined with the EDA planning focus allowed for the reflective control of the accelerated growth process. This was a critical juncture. In this sense, the hurricane was a good thing" (executive director—SFRPC). *It allowed for a "time out," in which disparate groups of planners and development entities were "connected" through the help of EDA planning grants resulting in sustained networks and partnerships across the region. This networking provided a better mechanism for the planning and regulation of growth. Acceleration of growth in certain areas of the region is a mirror to the future of the United States.*

According to the Executive Director of the SFRPC, the accelerated pace of development in the region provides a natural laboratory for the solution of problems to be faced by growing urban and suburban areas throughout the U.S. The post-disaster hiatus in development is also an opportunity to derive "lessons to be learned" arising from the EDA planning grant process that can aid in the planning of future urban development both locally and nationwide.

The sustained impact of all of this has been an unnatural experiment in urban planning—there was no plan. Things were just happening all over the region—no control over the process. Change was occurring in this region that were not expected and that did not occur this rapidly in other areas of the U.S.

The major factors that have contributed to the success of the EDA planning grant strategy were cited as "community and leadership support." The project manager "strongly agreed" that the grant created new economic opportunities in the region and further "agreed" that it had

- saved jobs in the area,
- increased jobs in the area,
- improved the local economy,
- improved the regional economy,
- increased community participation in economic recovery, and
- created new community/economic organizations and networks.

The project manager made the following summary points:

- The project could not have been possible without EDA resources.

- The overall performance of EDA as an administration was excellent.
- The SFRPC was very satisfied with the timeliness and level of monetary assistance provided by EDA.
- Based upon its original goals, the success of the project is considered excellent.

■ **Leadership**

The executive director of the SFRPC worked closely from the beginning of the project with EDA staff. Her leadership skills resulted in the creation of new partnerships from the networking seminars and conferences sponsored under the EDA grant. The SFRPC played an important role in planning the course of development after Hurricane Andrew for the region. New national and international contacts were made, and

partnerships evolved that resulted in job creation and capital investment in the post-disaster economy. The leaders (executive director, grants officer) of the SFRPC were cited by development partners such as the City of Homestead, Florida International University, Broward County Planning Commission, and Beacon Council as being key players in the post-disaster recovery process.

■ **Summary**

The SFRPC planning grant was successfully used to create networks and partnerships for economic recovery. The grant also successfully leveraged additional funding for development activities, and played a role in the development planning of the region. The overall rating of this project is outstanding.

Greater Miami Convention and Visitors Bureau (GMCVB)

■ **Project Description**

The project was designed to fund the development of a promotion video, a brochure, national media coverage/newspaper publicity, feature story placement in trade and special interest magazines, and other related marketing activities. The project would enable the GMCVB to implement a domestic marketing program to reinforce the message that Dade County's tourist industry and attractions were open for business and ready to serve visitors after the hurricane. The marketing effort was targeted to retain the domestic market that represented 52 percent of the visitors (4.4 million people) who visit the Greater Miami area annually. Also, a major component of the project (\$339,000) was to be used in the development of a long-range plan that would provide a comprehensive approach to revitalizing and expanding South Dade's tourism industry sector.

■ **Hurricane Impact**

Hurricane Andrew had a dramatic effect on South Dade County. The tourism industry was greatly affected as hotels, motels, restaurants, and commercial/retail businesses south of S.W. 88th Street were either completely destroyed or badly damaged. In 1991, 10.8 million people visited Greater Miami and spent \$7.2 billion during their stay. Over 98,300 people in the area were employed by the airlines, hotels/motels, restaurants, entertainment/attractions, and local transportation. An additional 195,000 people were employed in industries that benefit from visitor expenditures. Overall, thirty-one percent of Dade County's total employment is directly or indirectly dependent on the visitor industry.

■ **Projected Outcomes**

The project was expected to prevent and/or reverse a decrease in tourism revenue and the loss of jobs, and to generate new jobs through the creation of an expanded tourism base in South Dade. The videos and brochures were expected to reach thousands of potential visitors and were designed to get information to consumers and increase confidence about the Miami area as a visitor destination. The publicity program and feature story placements would build on the videos and brochures to reinforce the message that Miami was again open to visitors.

■ **Results**

The project is complete; the \$1 million grant has been spent. The GMCVB hired a public relations firm to get press releases out and stories into newspapers. The news stories were published in newspapers throughout the U.S. and worldwide.

In an interview with the current project director at GMCVB, he said that nothing would have been produced without EDA funding. His contact with EDA has been "great;" Dick Burnham has been very helpful.

The GMCVB produced a Visitor Industry Plan (VIP); a comprehensive strategic plan for tourism. According to the VIP, more than 300 visitor industry and community representatives from Dade County participated in the strategic planning process from March to December 1994.

A Working Group of 70 community leaders drafted the initial mission and goals, and elected a Steering Committee. Over 250 participants attended a day-long conference in which they recommended objectives and strategies. The Plan is also a product of dozens of Task Force meetings, five town hall meetings, a government briefing, a legislative summit, and a private-sector leadership focus group.

According to the project director, the brochures and videos produced with EDA funding told people that "We're up and operational; we're ready to receive you." After the two tourist shootings, the number of visitors, especially Europeans, decreased. The promotional materials, although produced for post-hurricane purposes, also helped to reduce fears of tourist violence. The videos were distributed to tour operators, travel agencies, and wholesale travel tour organizations throughout the U.S. and the rest of the world. They produced a total of 1,500 videos in several languages (English, French, Spanish, German, and Portuguese). The brochures promoted a "tropical Miami." A total of 150,000 brochures were produced and distributed.

The GMCVB also brought in 30 travel writers from Europe and South America. These writers visited and *stayed* in South Dade County. They visited the Everglades, the MetroZoo, Key Biscayne, the Monkey Jungle, the Parrot Jungle, etc. They then returned to their countries and wrote articles on South Dade in their own newspapers and magazines. The GMCVB was "selling" all of South Dade, not just one area like Kendall or Homestead. The promotion also reawakened the community's sense of "tropical Miami."

The project director stated that "We've seen a turnaround in tourism. We can't really measure if all of the increase is from EDA, but definitely some of it is due to EDA." He said that in the first six months of 1995, the number of visitors to South Dade increased by 42 percent.

■ **Networking**

The GMCVB formed several committees to work on the project, including a Tourism Development Committee, a Visitor Safety Committee, and a Tourism Recovery Committee. The working committees consisted of members from many different organizations in the Greater Miami area

and were designed to be "all inclusive," according to the project director. The GMCVB contacted people they had worked with in the past and set up meetings to tell them about the project and to create the committees. The question the committees were asked was "How are we going to bring tourism back to the area?" Since the committee members live in the affected area, they worked to get tourism and economic development back into their communities.

An interview with one of the organizations that was a member of the planning committees revealed continued involvement with the GMCVB. Since the committees were formed, the organization has been invited to several public relations meetings and to the GMCVB's annual meetings. Although the organization reports they are not in contact with *more* organizations than before Hurricane Andrew, they report working with the GMCVB. For example, they are asked to host journalists.

■ **Leadership**

Leadership for the GMCVB has been outstanding. The goals of the EDA grant have been accomplished in a timely fashion, and there has been a rebound in the tourist industry as a result. The director actively promoted the project among members of the GMCVB and acted as an intermediary between the local press and the international tourist community. He has shared his vision of a successful tourist industry by challenging members of established development committees to take aggressive action in promoting tourism in the Greater Miami area.

■ **Summary**

The GMCVB project has been very successful in the promotion of tourism. Although economic impacts and job creation are not directly measured in assessing this project, we can assume that a growing tourist industry has beneficial impacts on

job creation and retention and overall economic
development in the region.

Public Works/Infrastructure Projects

Florida City Commercial Water Distribution Project

■ *Description of the Project Area*

Florida City was almost totally destroyed by Hurricane Andrew. Before the hurricane, Florida City was a relatively poor agricultural area. Already one of the poorest cities in Florida, the prospect of recovery without outside assistance would have been grim. The town is only 2.5 square miles, with a population of 6,000 permanent and 3,000 additional seasonal residents, migrant workers, fresh produce packers, and visitors. Pre-hurricane construction included a large number of old mobile homes, all of which were destroyed by the hurricane. Overall, the storm damaged an estimated 80 percent of the City's taxable property.

Approximately 75 percent of the residents are minority populations with low to moderate income levels. The 1990 median income was \$9,946. Family income of 26 percent of the residents fell below the national poverty level. Most of the population work in agricultural-related business (service and retail), in the tourist industry, or at Homestead Air Force Base, which was destroyed.

The city has a designated "Enterprise Zone" of 986 acres, including 504 acres of commercial and industrial facilities of which the State Farmers Market is part.

Before Hurricane Andrew, the State Farmers Market had a total of 30 tenants: produce brokers and packers located in 13 buildings. The market realized annual wholesale sales of \$50 million from pole and snap beans, corn, squash, okra, tomatoes, and, to a lesser extent, tropical fruit. This figure does not include additional sales

brokerages and on-site sales. The tenants employed over 300 workers. In addition, the business conducted at the market was estimated to have supported 2,000 jobs in the immediate surrounding agricultural community.

■ *Local Hurricane Impacts*

The storm did \$7 million worth of damage to the State Farmers Market, with all buildings damaged and four destroyed. Much of the agricultural area supporting the market was shut down for months after the hurricane. Many of those who worked in the market left the area. Presently, the market has recovered its worker and tenant base. According to the market manager, there are again about 30 tenants, employing approximately 300 to 400 workers. Homestead Air Force Base was closed by the storm, and in Florida City, 785 jobs were lost and 1,986 threatened due to the closing of businesses resulting from Hurricane Andrew. Florida City's City Hall was destroyed, along with all of its records. Approximately 20 service establishments (hotels, gas, food, and restaurants) were severely damaged.

■ *Project Description*

The EDA project consists of repair, replacement, and expansion of the city commercial water distribution system. It includes a 250,000-gallon storage facility; 16,800 linear feet of 16" water-lines; valves; fire hydrants; and replacement paving.

■ *Purpose of the Project*

To replace and improve the city water treatment and distribution system to facilitate growth in the aftermath of the effects of Hurricane Andrew. It will also provide water supply for domestic, industrial, and fire protection. This will permit construction of a new 120-room hotel, an outlet mall, debris recycling plant, and industrial

expansion, including improved service to the State Farmers Market.

■ **Cost**

Five million dollars in improvements to upgrade the water system. This did not include \$1,500,000 in emergency community water assistance from FEMA for repair to other parts of the city's water system.

■ **Projected Outcomes**

The project was predicted to

- restore an estimated 785 jobs;
- save an additional 2,206 jobs;
- create an additional 670 new positions;
- leverage an estimated \$30 million in private investment;
- restore and renovate the Farmers Market;
- expand the industrial complex;
- allow construction of a mall, motels, and restaurants; and
- complement the construction of 50 new homes being built by "Habitat for Humanity."

■ **Results: State Farmers Market**

The new water distribution system has allowed for the reopening, restoration, and renovation of the State Farmers Market. The new pipe size of 12" (the previous line was 8") has improved the capacity of the market to handle produce and has significantly improved market processing and liquid waste disposal. According to the market manager, the original buildings have been restored and there are now some 30 tenants occupying the market, employing between 300 to 400 people. Produce facilities have been upgraded, and most of the agricultural suppliers are now providing crops of beans, okra, corn, and other vegetables as

before. The original workers in the agricultural support sector have been replaced by new migrants, but in the same numbers as before (approximately 2,000).

The State Farmers Market is an improved operation from the one existing before the hurricane, due to the EDA funding.

Patrons agree that the market is improved over what was there before. The regrowth of the area has also brought in new business to the market. However, some crops, such as lime groves, have not recovered to their pre-hurricane status. Also, many tropical outdoor and house plant growers who employed local laborers before the hurricane have become automated. Workers who used to spray down plants with hoses have been replaced by modern sprinkler systems and climate controlled facilities.

In summary, *the State Farmers Market is an improved operation, due to EDA funding, from the one existing before the hurricane.* The jobs generated are nearly equal the number of those before the disaster. However, some jobs have been lost in the surrounding agricultural sector because of the slow recovery time of some crops (especially tropical fruit groves) and the automation of tropical plant growing facilities.

■ **Results: Florida City Keys Factory Outlet Mall**

The commercial water line attracted the Prime Group from Baltimore to construct a factory outlet mall in Florida City with 52 shops. According to the city manager and local newspaper reports, the mall was built in Florida City for the following reasons.

- The location is excellent.

- The site is at the intersection of a federal highway, with a local traffic light.
 - An estimated four million cars pass the site in one year on their way to the Florida Keys.
 - The mall site is visible from the freeway in a gateway position between the Florida Keys and Southern Dade County.
 - The mall is within a one-hour drive of at least 3 million people who visit the area annually.
 - The commercial water line infrastructure was in place due to EDA funding and, consequently, did not have to be paid for by the developers.
- property taxes, for the first year, of approximately \$640,000, of which one quarter went directly to Florida City; and
 - annual sales tax revenues in excess of \$3 million per year, of which 30 to 40 percent will ultimately be returned to Dade County via a variety of revenue programs and grants.

■ **Results: Related Outcomes**

Other impacts of the commercial water line include plans for a dozen other businesses in Florida City. These range from local stores to nonprofit service organizations. Thus, the commercial water line is having a revitalization effect throughout the city area.

According to the city manager, the most important factor that caused the mall to be built in Florida City was the presence of the EDA-funded commercial water line. Prime Group, the Baltimore based developers, also has stated that the mall would not have been built in Florida City without the water line. If the developers had to pay for the installation of such infrastructure, they would have seen it as a great disincentive.

In an interview with the city manager, the following points were made:

The mall construction phase created over 500 jobs, and Florida City residents were given preference in hiring. The mall presently has 52 shops in operation and has generated approximately 300 jobs. It is estimated that the final expansion of the mall will result in 400 to 500 permanent jobs. Most of the mall tenants are outlets for major chains such as Levis, L.A. Gear, Mikasa, and Bugle Boy. Preliminary data suggest that these businesses were not in Florida City before the hurricane and would not be there now if it were not for the mall. Estimated economic impacts of the mall are:

- property value of \$20 million;
 - annual sales of \$40 to \$50 million;
- The project is 90 percent complete.
 - EDA's performance was characterized as outstanding; timeliness in providing disaster assistance for this project as "very satisfactory;" and the level of monetary assistance provided by EDA is rated as "satisfactory."
 - Without the EDA assistance, at least 75 percent of new commercial projects would either have been delayed or nonexistent.
 - The City of Florida City and the developers have benefited the most from the project through the increase in the tax base and cost savings in infrastructure expenses.
 - The project will accelerate commercial growth and development in otherwise vacant commercial and industrial areas.
 - The project will provide at least 500 permanent new jobs in the first 3 years.
 - Design changes, placement of interim financing, and the bidding process caused a 4-month delay in project start-up.

- In the long run, the client population will benefit from an increased potential for better-paying local employment and upgraded safety and health (from the new water lines equipped with previously lacking fire hydrants).
- In the project development phase, the city worked with other state and federal organizations as well as non-governmental organizations such as the City of Homestead; We Will Rebuild; Habitat for Humanity; The Beacon Council; the County Planning Commission; Miami Dade Capital Development, Inc.; U.S. Small Business Administration; and the Federal Emergency Management Administration.

■ **Leadership**

The leadership for the Florida City Project came from the City Manager and the Mayor of Florida City. The Mayor and City Manager demonstrated effective leadership by ensuring that city residents were favored in hiring for all construction work related to the grant. They were also favored in hiring by the Mall shops. The goal was to create both short- and long-term employment for Florida City residents. Leadership was further demonstrated in their convincing the Mall developers to build in Florida City rather than elsewhere. Tax incentives were provided on land used for construction. New local businesses were also provided tax incentives in connecting up to the commercial water line installed by EDA. Without this infrastructure, the Mall developers would not have come to the City and other local businesses (e.g., the Farmers Market) would not have benefitted.

■ **Leadership in Leveraging Jobs and Business Development**

Informal interviews with 32 merchants at the Mall provided some indication of community reaction towards the Mall construction. These businesses

employed a total of 194 part and full time local residents. None of the 32 shop Managers indicated that their businesses were in Florida City before Hurricane Andrew. The City Manager and Mayor were given credit by the Mall manager for providing these jobs. When asked how the Mall helped their business, shop managers responded as follows:*

- “Improves area” (10%);
- “Provides new jobs” (10%);
- “Improves the community” (24%);
- “Provides a place to shop” (16%);
- “Good advertising and proximity to customers” (24%); and
- “Brings visitors and revenue to area” (22%).

*(These percentages are based on multiple responses from some managers.)

Only one of those interviewed indicated that the Mall did not have a positive impact (has not brought business) while another indicated they were “going out of business.”

■ **Summary**

The Florida City commercial water line has been a very successful EDA project. Effective leadership has resulted in many new jobs and businesses for residents. It has also revitalized the City economy, leveraged outside resources, and increased tax revenues. Effective progress is demonstrated by the completion of the Mall and the development of at least 12 other businesses on the commercial water line. The Farmers Market was also able to reopen and recover lost jobs. The Mall and other local projects have been carried out with the help of partnerships with many regional and state organizations.

The Hialeah Farmers Market

■ *Description of the Project Area*

The economy of Hialeah has changed considerably since 1972 when manufacturing accounted for the highest percentage of employment. Hialeah was known as the "blue collar community" of Dade County. The manufacturing of apparel, textiles, chemicals, fabricated metals, food products, furniture and fixtures, printing and publishing, and electric and electronic repair formed the base of the economy. The proximity of Hialeah to the airport meant that many residents also had jobs in airport support services and construction contracts. The largest percentage of manufacturing has been in the garment and casual shoe industry. Since 1972, service sector jobs have increased and now account for over 75 percent of the total employment.

The labor force includes the highest concentration of foreign and minority residents of any place in the United States. According to the 1990 U.S. Census, 99.7 percent of Hialeah residents are minorities. Traditionally, Hialeah has been the greatest provider of low-cost housing in South Florida. At the end of 1991, there were 2,208 empty residential units, with an additional 853 units under construction.

■ *Local Hurricane Impacts*

The City of Hialeah was not in the direct path of Hurricane Andrew. It did experience secondary impacts, such as loss of power and other services. However, it was primarily impacted by the shock-wave effect of out migration from the disaster area. The City of Hialeah Office of Economic Development has estimated that more than 8,000 residents from South Dade flooded into Hialeah after the hurricane. Displaced persons arrived from Homestead, Kendall, Naranja, Perrine,

Cutler Ridge, and other affected areas. These refugees from the disaster for the most part remained in Hialeah and have become permanent residents.

Before the storm, Hialeah had a housing vacancy rate of 4.5 percent; after Hurricane Andrew, the rate dropped to a low 0.1 percent, where it remains. More residents put strains on city services and the local economy. Hialeah had insufficient jobs and housing to meet the demand. Due in part to the disaster, Hialeah is presently the most overcrowded city in Florida, with 8,890 people per square mile, compared to the surrounding county average of 990. The demand for public services has increased and the public works infrastructure is overloaded. The overcrowding in the city creates an additional permanent increase in costs for which no funds, emergency or otherwise, are available.

Hialeah's main objective is to create employment at a rate of 1,800 jobs a year. Because of the emergency nature of the situation created by the hurricane and a downturn in the local economy, they require immediate, cost-effective programs that can bring the desired results.

■ *Project Description*

The EDA project will rehabilitate the old Hialeah train station. The site is next to Route 27, which connects with the Palmetto Expressway, I-75, I-95, and LeJeune Road, and is less than one mile from the Miami International Airport. The train station will be converted into a Farmers Market and Produce Exchange and provide office space for Hialeah Dade trade expansion programs. The project will include concrete slab flooring, roof improvements, ramps, docks, water and sewer, parking, and other related infrastructure, including street access improvements from Route 27.

**Table 4 —
Project Cost: The Hialeah Farmers Market**

EDA	\$1,500,000
Applicant	\$250,000
Total	\$1,750,000

■ **Purpose of the Project**

The project addresses some of the major elements of the economic crisis in the City of Hialeah resulting from the dislocation of people as a consequence of Hurricane Andrew. Project activities also address pre-existing economic conditions resulting from the loss of a major manufacturing distribution center and service industries. This grant would be complemented by more than \$1 million in private-sector funds.

■ **Projected Outcomes**

- The Farmers Market will revitalize a depressed area of the city by creating an economic attraction with appeal to city residents, county residents, and tourists.
- The market will create, in the short term, an immediate 200 new jobs associated with the sale of goods and services in the market.
- The combined funding for the grants and city programs will account for more than \$2 million in this strategic area.
- The project is expected to trigger an additional 1,000 jobs in the immediate area, including the utilization of a now vacant Winn-Dixie distribution facility.
- The market will serve as a link with an international produce trade with South America, since it is used by major tropical fruit distributors in the area.

- The market will create a distribution and sales outlet for the agricultural producers of Dade County.
- The facility is projected to bring shoppers from Dade, Broward, and Palm Beach Counties, with a population of over a million people. The regional tri-county transportation system "Tri-Rail" stops at this location.

■ **Results**

Construction of the market has experienced some delays and is behind the projected schedule. These delays are due to the following:

- a change in building codes and regulations after Hurricane Andrew;
- a change in city administration since the approval of the project; and
- the decision to conduct an additional market analysis of farmers market potential in Hialeah.

However, the project is going forward into construction. Supporting its continued viability are its strong marketing potential, as evidenced in the recent study.

At the city's request, the Chesapeake Group, Inc. conducted a market feasibility study in 1995. It found that some 41 percent of 500 households contacted in a telephone survey presently purchased fresh produce from a market or business other than a supermarket. If a farmers market were available, a much larger proportion of the sample (71%) reported they would use it.

Some 22 percent of the households also purchase fresh fish or seafood from a market or vendor other than a supermarket. While many do not make such purchases at present, the lack of available vendors in the area may be a primary reason. Almost two-thirds (63%) stated that they

or another household member would be likely to go to such a market if it existed.

The tourist appeal of the farmers market will be derived from a festive but casual eating and shopping center. Eating facilities and transportation will make the market appeal to residents as well as those from outside the area. In contrast to most farmers markets, the market will have a Spanish tile roof, palm trees, stucco facade, and wrought-iron railings. The Tri-Rail will allow people from as far away as Palm Beach County to come to the market. A monorail will eventually connect the market to Homestead, thus supporting the major agricultural center of the region and providing customers with fresh local produce at wholesale prices.

■ **Leadership and Project Adaptation**

The City Manager provided leadership for this project. His many years experience in city management, including the administration of several previous EDA grants, allowed the project to accommodate delays caused by the election of a new mayor.

The improvements on project design came partly as a result of a marketing feasibility study requested by the mayor's office. By revealing

local consumer preferences, the study will improve the overall project impact.

■ **Leveraging Resources and Jobs**

Elections and changes in building codes have delayed the creation of jobs and stakeholder empowerment from the Farmers Market project. The conducting of the market feasibility study is an empowerment instrument that will better fit the market with the needs of the community. Additional resources will come when the market is completed and additional businesses such as restaurants, gift shops, and produce stands are established.

■ **Summary**

Effective progress has been somewhat delayed by changes in building codes and a mayoral election in Hialeah. As a result, the job creation and leveraging of outside resources from business development in the market have not yet occurred. The delay has allowed the project leadership to conduct a marketing feasibility study which has increased the understanding of potential project impact on community consumers. Construction of the project was just underway at the time of the assessment.

MetroZoo

■ **Description of the Project Area**

MetroZoo was founded in 1956, and the present facility was built in 1972 under the administration of the Metro Dade County Parks and Recreation Department. MetroZoo, west of the Florida Turnpike and between S.W. 124th Avenue and S.W. 152nd Street. One of the largest zoos in the U.S., it has over 700 acres of land within its boundaries. MetroZoo's animal collection consists of approximately 260 species, containing over 900 live specimens of reptiles, birds, and mammals. MetroZoo is located 20 minutes from Miami International Airport, 30 minutes from the Port of Miami, and 45 minutes from Fort Lauderdale. MetroZoo is supported by the Zoological Society of Florida which provides educational programming, publishes a bimonthly newsletter, and sponsors volunteer services for the zoo. The zoo has a board of directors made up of community leaders in Dade and Broward counties who support the educational, conservation, and recreational goals of the zoo.

The MetroZoo is an important resource for tourism and recreation in the South Dade area, which was the sector of the economy most heavily hit by the hurricane.

The MetroZoo is a primary tourist destination in South Florida. The zoo not only depends upon visits from tourists, but also receives strong local support from residents to be successful. It makes a good alternative to the beaches for those who want a destination in the area close to their homes.

■ **Local Hurricane Impacts**

The zoo suffered directly from damage to its facilities and indirectly from the damage suffered by local residents. Many local residents were regulars before the hurricane, often spending parts

of the day at the zoo during the week. This was particularly true for those who visited the aviary, considered by many to be the centerpiece of the zoo exhibits.

Most of the residents around the zoo suffered severe damage to their homes and businesses from Hurricane Andrew. These individuals represented the core of community support for the zoo. They did not return to the zoo for many months because they were engaged in efforts to solve their own problems with hurricane damage to homes and businesses.

The MetroZoo suffered the following major damage from the hurricane:

- The aviary, the centerpiece of the zoo, was totally destroyed at its prime, with the bird population at its height in both number and diversity. The aviary has not been rebuilt due to delays and disputes with another federal relief agency that assumed responsibility for its reconstruction.
- Most of the large birds were saved by being put in holding areas. The supervisor of the bird collection and his team were able to catch 56 flamingos and 103 cranes, vultures and storks and secure them in the zoo's hay barn.
- Habitats for other animals were also destroyed by the hurricane. For example, the grove of eucalyptus trees used for feeding the koalas was destroyed in the hurricane and has not yet recovered.
- Fences surrounding the night houses for the larger mammals were destroyed during the hurricane, creating a potentially serious hazard, as there was nothing left to actually hold these dangerous animals in their paddocks.
- All food storage capacity for the animals, such as the freezer for the meats, was destroyed. Busch Gardens came to the rescue with a

refrigerated storage van and other foodstuffs for the animals.

- The entrance and pathways of the zoo were impassable, covered with debris and fallen trees and vegetation. It took two weeks just to clear the parkways for vehicle traffic.
- The zoo restaurant, entrance, parking area, water pumps, and fencing were all destroyed by the hurricane.
- The downed fence surrounding the zoo perimeter allowed numerous abandoned dogs from adjacent neighborhoods to roam freely in the zoo.
- Presently, over 70 percent of the other exhibits have reopened. Unfortunately, this does not include some of the more valuable and popular exhibits, such as the koalas. Many of the animals in unopened exhibits remain in other zoos in Florida and elsewhere in the U.S.

"EDA truly was a support agency in every aspect of the recovery process—they have been nothing but cooperative and helpful."

MetroZoo Grants Manager

■ **Project Description**

The EDA grant to the MetroZoo project will allow improvements to be made to the existing facilities as well as provide additional facilities for expansion of the MetroZoo. The improvements and expansion will be made to water and sewer, the entrance, paving and lighting in the parking facilities, educational indoor/outdoor auditorium, picnic shelters, and restroom facilities.

■ **Purpose of the Project**

Implementation of this project will help MetroZoo reestablish employment opportunities and

improve the community's quality of life by restoring a much used recreational facility. By reopening and expanding MetroZoo, South Dade's tourist economy will be stimulated.

EDA Share (100%)	\$4,500,000
Applicant (Waiver Requested)	\$0
Total	\$4,500,000

■ **Results**

The EDA grant was just one part of the larger and very complicated recovery program needed to restore the MetroZoo. The restoration process required prioritizing so that essential infrastructure designed to protect the health and safety of the animals and visiting public was repaired. For example, the National Guard began the process of securing the animals and by December 1992, the zoo was partially reopened. The reopening of the zoo had a profoundly favorable psychological effect on local residents, who visited immediately in large numbers.

"EDA has been very efficient and their grant less costly to administer than others. This is because EDA doesn't just help people during disasters—they already have ties to municipalities and agencies throughout the country with some foreknowledge of what the needs are. They identify needs, solicit and review projects, and have the experts with which to do that."

(MetroZoo Grants Administrator)

Personnel involved in the rebuilding consider the EDA contribution to the zoo project to have been the easiest to administer and the most helpful in its timing and outcomes. Key informants at the zoo and Parks and Recreation believed this was due to the knowledge EDA staff have of *how busi-*

ness functions and how local economies function. The conclusion is that professional EDA staff have developed an in-depth understanding of the “culture of business.”

The EDA funding has

- maintained and improved water and pump systems used for the cleaning and maintenance of all animal enclosures and for the irrigation of all plant exhibits and lawns at the zoo;
- improved the parking areas, increasing access to the zoo facility;
- created additional jobs and investment for the zoo and community through the reconstruction and remodeling process;
- restored the zoo restaurant and constructed a public restroom facility on the back 200 acres of the zoo;
- allowed the modernization and rebuilding of the zoo entrance; and
- provided for the construction of a 12,000-square-foot educational court. The court will be used to exhibit artifacts and various other educational items on loan from the Smithsonian. It will also include a pavilion and recreation area for school and discussion groups. This represents an educational resource that was not present before the hurricane, and is thus an improvement in the educational capacity of the zoo.

The overall satisfaction of zoo personnel and administrators with the EDA contribution to its recovery has been very high. Officials involved in the reconstruction made the following points:

- EDA was very timely with its response—the grant was the first one applied for and approved for funding, sending a critical psychological message that the “zoo would be back better than ever.”

- Once funding was approved, EDA did not interfere with the decision-making process by zoo administrators as to the timing of construction or the letting of construction contracts. The need to comply with new building codes and regulations and to prioritize the repair and reconstruction process at the zoo led to some delays.
- The professionalism and expertise of the EDA staff was rated as exceptional. Besides helping administrators prepare the EDA grant, EDA staff also provided technical assistance to the zoo administrators in responding to the grant requirements of other disaster recovery agencies.
- The major components of the grant relate directly to the visitors—new restrooms, a new front entrance, and an educational facility.
- Officials felt that zoo visitors will benefit the most from the EDA project by having their experience enhanced, which will possibly generate additional visits.
- The recovery of the zoo is a complex process that requires all of the components, particularly centerpieces like the aviary, to be restored before the zoo can achieve its potential. The full impacts of the EDA funding cannot be realized promptly because agencies controlling other funded projects, like the aviary, have not been as efficient as EDA in their grant administration strategies.
- Without the EDA assistance, the zoo would have had to continue to defer maintenance of improved systems and deal with the non-existence of the new educational facility making the zoo a less desirable destination.
- Zoo officials were very satisfied with EDA’s efficiency and timeliness in responding to the disaster.
- Zoo officials also reported being very satisfied with the level of monetary assistance.

- In the future, the EDA project will continue to have a positive impact on the client population because it will improve patron amenities in the park and enhance the visitors' experience.

As the zoo draws visitors to South Dade, it will also have an impact on improving the local economy in areas surrounding the zoo. Visitors have increased since the hurricane by 200,000 from 1993 to 1994 (see Table 6).

Year	Attendance
1993	330,000
1994	530,000
1995 (Projected)	570,000 – 575,000
1996 (Projected)	600,000 – 615,000

■ **Effective Leadership**

MetroZoo is under the auspices of the Metro Dade Parks and Recreation Department. Leadership for this project came from the revenue office of the Parks Department, from the zoo director, and from the grants director of the zoo itself. All of these individuals did outstanding work in guiding the EDA project. Their efforts resulted in rapid completion of the EDA portion of the work. They cooperated with many agencies and individuals in this effort and raised the consciousness of the importance of the zoo for the entire community.

An important factor in their success was experience. The director of revenues for the Parks department had many years experience in fund raising and grant administration. The present director of the zoo has worked at the facility in one capacity or another since he was 16 years old. Now in his forties, he described the zoo staff as a

“working family” dedicated to the survival of the zoo and the well-being of zoo visitors and animals. As their leader, he regularly interacts with local chambers of commerce, the Florida Zoological Society, the Miami Visitors and Convention Bureau, and many other organizations, including zoo volunteers (docents). His staff have very high praise for his efforts to bring the zoo back to its original status and his sense of vision towards making the zoo better than before.

His efforts have included major advertising campaigns to promote the zoo. He has traveled across the U.S. and to other countries to “sell” his institution and let other zoological gardens know that the zoo is recovered from the disaster and open to business. A recent trip to Indonesia resulted in the loan of a Komodo Dragon for display at the zoo. The Indonesian government considers these animals as national treasures, and rarely gives permission for one of them to be borrowed for display purposes. This rare animal also takes special care, and the facility and staff was judged by Indonesian officials to be up to the task.

■ **Summary**

The EDA project at the MetroZoo has helped in the recovery and reopening of this important facility. Effective leadership has maximized the benefits of the project, as demonstrated by the steady increase in post-disaster attendance at the zoo. All EDA-funded infrastructure restorations have either been completed or are under way. Stakeholder empowerment was reflected in extensive community and volunteer participation in the zoo recovery. The most difficult obstacle to overcome has been the loss of the aviary, considered by many as the centerpiece of the zoo. Infrastructure replacement of the aviary is under contract to another agency.

Homestead Commercial Water and Sewer Project

■ *Project Description*

This project provides funding to construct water and sewer lines and improve roads in Homestead. This work will extend water and sewer services to the new Homestead Motorsports Complex and Park of Commerce facilities, which could otherwise not be built. It is estimated that these facilities, when fully developed, will provide 12,000 jobs for workers displaced by Hurricane Andrew. Dade County initially committed \$11 million to assist with on-site improvements to the motor sports complex. As a result, this state-of-the-art facility is the only race track in the United States that can provide Formula 1 racing.

The industrial park will be designated a Free Trade Zone, whose goal is to attract international trade partners to the area. For example, plans include the importation of Formula 1 auto parts from English firms for engine construction and repair.

■ *Project Cost*

The cost of the project for EDA is \$7.0 million.

■ *Purpose of the Project*

The project will allow significant business and recreational development to occur in Homestead. The project is expected to have significant impact on job creation and private investments. All residents of South Dade will be direct and indirect beneficiaries of the development as they bring in tax dollars and have a multiplier effect on the local economy, bringing in out-of-town dollars for goods and services in the South Dade area.

The EDA-funded projects, in particular the Motorsports Complex, will serve as marketing tools to demonstrate that Homestead is on the road

to economic recovery and, in some ways, is better than before the disaster.

■ *Local Hurricane Impacts*

The City of Homestead suffered major losses to its economy and infrastructure after Hurricane Andrew. The city lost 50 percent of its electrical service and 85 percent of the buildings (homes and businesses). The economic base, for all practical purposes, vanished. Homestead Air Force Base, a major source of employment was destroyed. The local agricultural industry, another major employer, initially lost \$250 million in permanent income, \$580 million in damage to structures, \$130 million in damage to the groves, and \$280 million in losses to the foliage/nursery industry.

"The destruction of Hurricane Andrew was the catalyst for making this project come to fruition. The infrastructure provided to the sites allowed new business to be developed to replace those lost to the storm. This project could not have been realized without EDA assistance."

*Director—Community Development
and Planning*

Another major impact was the significant loss in population after the disaster. The population dropped by 40 to 50 percent after Hurricane Andrew. Although the population is returning to pre-disaster levels, many of the original residents never returned. The city manager noted that many who left, as well as many people across the country, still hold an image of Homestead as a devastated area.

■ *Project Impacts*

The promotion of the project has been under the auspices of the Beacon Council (Dade County's economic development organization), the Greater

Homestead/Florida City Chamber of Commerce, and the City of Homestead.

Construction on both infrastructure components is complete and hundreds of permanent jobs have been created for local residents. The results of the industrial park and The Motorsports Complex will be discussed separately below.

■ **Industrial Park**

Initially, fourteen companies, with the potential to employ over 2,500 workers, expressed interest in the industrial park. Initial inquiries about locating in the park came from the following types of companies:

- a recreational boat building operation that will employ 300;
- a truss assembly plant that would employ 200;
- a clothing operation that would employ 200;
- a modular home factory that would employ 250;
- an aircraft maintenance company that would employ 600;
- a data processing center that would employ 150; and
- nine other companies identified by the Beacon Council that would employ a total of 840 workers.

The industrial park is presently underutilized, but it is expected that the other initial businesses will move into the park over the next several years. As a result of the industrial park, a local health care conglomerate has expressed an interest in developing a 13-acre parcel immediately west of the Foreign Trade Zone site for a sports and industrial medicine clinic. This facility would employ 50 people.

The City of Homestead Chamber of Commerce's development plan encourages the creation of business clusters that complement each other. For example, within the Free Trade Zone, a plan was formulated to create an "International Village" where local vendors can develop international business contacts and markets for local products. Committed companies have the potential to employ over 2,500 workers. The ultimate goal is to have about 20 jobs per acre on the 280 acre site, resulting in a total of 5,600 maximum jobs in the industrial complex. Presently, companies occupying the park employ over 400 people.

Businesses that have made firm commitments to the park and/or are already operating there include:

- Contender Boats, employing 300;
- Guanmard Scientific, a firm that supplies supply medical training devices to the United Nations that are used worldwide, 70 employees;
- Silver Eagle Beer Distributors, 105 employees; and
- Anderson Walls, about 30–35 employees.

Other signs of effective progress include pending contracts with Motorola, which hopes to bring in two companies to provide captive suppliers with high-quality subcomponents. This is termed a "suppliers integration program" and is designed to help smaller companies get established. Knappe, a company out of Grabau, West Germany, is also considering the park for its water treatment equipment plant under the free trade zone in the park.

■ **The Motorsports Complex**

The Homestead Motorsports Complex is fully operational. The completed facility includes seating for over 60,000 (from an original plan for only 9,000), skyboxes, 30 garages with 30 VIP suites above, and parking for more than 19,000

cars. The \$59 million state-of-the-art facility is capable of hosting nearly every kind of professional auto race. For example, the following is the diverse racing schedule so far for the upcoming year:

IndyCar Spring Training	February 5–9, 1996
Marlboro Grand Prix of Miami (Toyota)	March 1–3, 1996
NASCAR Super Truck Series	March 16 & 17, 1996
AMA Superbike and 250 GP	May 18 & 19, 1996
Jiffy Lube Miami 300	Nov. 1–3, 1996
Busch Grand National	No date provided

The inaugural race, held on the weekend of November 3–5, was attended by over 63,000 people and televised nationally on CBS. Total attendance over the 3-day event was estimated at over 100,000, with 15,000 and 23,000, respectively, attending the first two days, and 63,000 the day of the race (November 5th).

Local businesses, from gas stations, restaurants, and local ice and paper product suppliers to fresh produce and snack food distributors, also benefited from the event.

In the design of the EDA grant, the project director ensured that local residents were hired by the various new businesses attracted to the site. Community-based organizations were included in the initial design to work with the businesses to further local economic development.

A major marketing campaign has also begun, using such sources as *Business Week* and the *Wall Street Journal*. A recent full page advertisement in the *Journal* was designed to promote the Motorsports Complex, South Dade County, and Homestead. The campaign features sports packages with tours of the downtown Homestead antiques and business shop area for wives of race fans. The campaign also plans a 30-second TV commercial, under production, with the donated race car of Ralph Sanchez. This will show a

“behind the hood” tour of the Homestead Motorsports complex and community.

In the initial grant, the project director protected local residents by ensuring that they would be hired by the various new businesses attracted to the site. Also, community-based organizations are involved with these same businesses so that they could further local economic development.

During race events, 300–400 part-time workers are employed. These included ticket takers, beverage servers, ushers, parking attendants, and other support staff. Twenty full-time employees include painters, security, and lawn maintenance. Two driver training schools have hired seven employees. (One school uses “Indy” style cars for training while the other specializes in training security and government agencies in high speed chase vehicles.) The track is also rented, on a daily basis off-season, to racing teams for engine testing and racing practice.

■ **Leveraging of Funds**

The City of Homestead has raised additional funding for the Industrial Motorsports Complex. The initial \$11 million from Dade County came from hotel-bed tax monies. In February 1993, county commissioners added another \$20 million in revenues from a sports-related bond issue. The City pitched in another \$5 million to bring the total up to \$36.5 million. Commercial sponsors eventually upped the total leveraged funding to \$51 million. The additional funding comes from sale of track rental signs and a City contract of \$8 million with Miami Motorsports, for a total of \$59 million.

■ **Partnerships**

The City of Homestead has forged partnerships from the Homestead complex that did not exist prior to the Hurricane. The following organizations have been networked or partnered with on

the Motorsports Complex and other related disaster recovery initiatives by the City of Homestead Community Development and Planning Department:

Local Government and Community Development Organizations:

- Miami Motorsports
- Homestead Chamber of Commerce
- Vision Council

Regional:

- County Planning Commission
- The Beacon Council
- Metro-Dade Community College Homestead Campus

State:

- Florida Economic Development Commission
- We Will Rebuild
- Habitat for Humanity

Federal Agencies and National Organizations:

- U.S. Small Business Administration
- National Mainstreet
- International Downtown Association
- Federal Department of Transportation

All of these linkages have been directed at improving the development environment in South Dade, improving the viability of the Motorsports Complex project, and attracting tourism and new business to the area.

■ **Assessment of EDA**

In an interview with the project director (City of Homestead Director of Community Development and Planning), the following points were made:

- The overall performance of EDA for the community of Homestead was “outstanding.”
- The City was very satisfied with the timeliness and level of monetary assistance provided by EDA.
- The success of the EDA-funded project based upon its original projected goals is rated as “outstanding.” This is based on the viability of the project to attract tourism and positively affect the local and regional economy.

The project director was asked to assess a list of development parameters on a scale from “strongly agree” to “strongly disagree.” The items are listed below followed by his responses:

EDA assistance has

- saved jobs in the area (agree);
- increased jobs in the area (strongly agree);
- improved the local economy (strongly agree);
- improved the regional economy (strongly agree);
- created new economic opportunities (strongly agree);
- brought new business to the area (strongly agree);
- increased community participation in economic recovery (agree);
- brought new residents to the area (neutral); and
- created new community/economic organizations and networks (strongly agree).

The project director was also asked to rate this EDA project on a scale of 1 to 5 (1 means "no difference;" 5 means "major difference").

Responses to the general question "How has EDA assistance helped the organizations/businesses make a noticeable impact on how the community of Homestead deals with disaster issues?" are:

- making the community more aware of disaster issues (3);
- strengthening community organizations (5);
- improving cooperation between community organizations (5);
- providing a sense of community leadership (4); and
- encouraging civic responsibility (5).

Finally, in response to the question, "What impact will the EDA assistance project have for the client population in the long run?," the Project Director said:

"EDA funding has provided infrastructure for this project that was crucial to its success. The assistance they provided will allow for job retention and creation and business startups for the client population, thereby attracting other investments and increasing the standard of living and sense of community pride."

■ **Leadership**

Leadership in the development of this project has been outstanding, due to the cooperative efforts of several different individuals and organizations. The city manager and the Director of the City of Homestead Planning Department played major roles in securing businesses and the Motorsports Complex for the city. The Vision Council and

Chamber of Commerce have been instrumental in promoting the project.

The owner of Miami Motorsports worked closely with the city and community governments in securing funding for the Motorsports Complex. This was critical in upgrading the original design to a state-of-the-art facility. The Vision Council, a development arm of the city, has aggressively sought out businesses to locate in the industrial park, and further promoted the Motorsports Complex through regional and national advertising campaigns.

Leadership resulting in local empowerment comes from the directed preference of residents for part-time and full-time employment at the Motorsports Complex. Participation and empowerment of the local business sector in project development has resulted in plans for a shuttle service to the Homestead business corridor to operate during racing events. This will bring patrons to the shops of downtown Homestead, providing an alternate activity for families of racing fans.

■ **Summary**

The Homestead water and sewer commercial extension has allowed for the development of the Industrial Park and The Motorsports Complex. These facilities have provided a significant economic boost to the City of Homestead and South Dade County. Although the Industrial Park has not reached its potential at this time, the Motorsports Complex is fully operational. The opening was very successful, with over 60,000 patrons in attendance on race day. Leadership and leveraging of secondary resources has been outstanding in this EDA project. Hundreds of permanent and temporary jobs have been created by the project, and many more are anticipated, with a total predicted employment impact for the area of 12,000 jobs.

South Dixie Highway Commercial Water and Sewer Project

■ *Description of the Project Area*

South Dixie Highway (U.S. 1) and the Florida Turnpike are major corridors for traffic to the cities of Homestead and Florida City and tourist destinations to the south, including Key West. The project area covers approximately 400 acres of property along the Dixie Highway between 232nd Street and 264th Street.

Prior to Hurricane Andrew, there were a number of small businesses in strip malls and stand alone structures along South Dixie Highway. These businesses included automotive dealers, small restaurants, repair shops, hair salons, clothing stores, fruit and vegetable packing houses, convenience stores, and building suppliers.

The original businesses along this stretch of the highway served a clientele as far south as Homestead and Florida City. Most area businesses bordered the highway, with the surrounding land in the communities of Naranja and Princeton dedicated to agriculture. An agricultural co-op along the road served forty families who produce limes, pole beans, okra, and other fruits and vegetables. Also, a large flea market is present in the area, and is being considered for a revolving loan grant under another EDA project.

The project area is poor. Some 75 percent of the business structures are owned by minorities and migrant farm workers. Most of the residents work in agricultural related activities or businesses (service and retail) or in jobs connected with the tourist industry.

■ *Local Hurricane Impacts*

In the aftermath of Hurricane Andrew, 1,800 jobs were lost in the project area. Business structures and homes along south U.S. 1 received only a

moderate amount of hurricane damage, but lost much of their client base. Because some of the businesses such as clothing and hardware stores managed to open fairly soon after the disaster, they provided essential services to many hundreds of homeless and displaced persons from the impact zone further south. This created an artificial surge in business in the area. Some of the business owners took advantage of the situation by raising their prices, while others took the approach of keeping prices down with the hope of attracting new customers after the disaster phase.

However, outmigration from the Florida City and Homestead area eventually depressed this artificial market, and businesses relying on a local clientele began to suffer. Some of the businesses closed and left the area, while others just barely manage to survive today.

In the immediate area along U.S. 1 there were 93 small businesses employing 300 people prior to the disaster. As of March 1993, 22 businesses had reopened, employing 72 people. Since March 1993, others have opened bringing the total to 50 businesses. Of the businesses that have reopened or opened, only two out of 20 visited were new to the area, indicating that the area is economically stagnant. By contrast, just south of U.S. 1 the Florida City Keys Mall is populated with new businesses.

Owners of vacant properties along the South Dixie Highway corridor have failed to attract new construction to the area. They have been stymied in sustaining interest in development because of a lack of adequate commercial water and sewer line facilities. Before Hurricane Andrew, all businesses along the highway used individual septic tanks and wells, and a privately owned water system that had little capacity for commercial expansion. Some of these tanks were damaged after the hurricane, while others do not meet established county codes. Because of the degree of existing commercial, agricultural, and

industrial development, private wells and septic tanks are no longer viable alternatives. Furthermore, septic tanks and wells are impediments to commercial expansion and new construction and hinder economic development in the area.

A survey of businesses conducted in mid-January 1993 by Dade County indicated that over 60 percent would expand or rebuild if adequate water and sewer services were available. However, continued lack of access to sewer lines will cause further economic decline in this key area of South Dade. Interviews with key informants confirmed that unemployment, crime, and loss of a client base have increased in the absence of any completed incentive for development.

■ **Project Description**

The EDA project addresses the inadequate water and sewer system by funding new water and sewer mains along the South Dixie Highway between S.W. 232nd and 264th Streets and along the adjacent roads. (These include approximately 39,000 linear feet of 10", 12", and 24" water main and 29,000 linear feet of 8" gravity sewer main; 300,000 feet of 12" and 24" force main; 2 sewage pumping stations; and 124 fire hydrants and related appurtenances.)

■ **Purpose of the Project**

The facilities will supply potable water and sanitary sewer service to a commercial and industrial area previously served by wells and septic tanks. These infrastructure improvements will allow future growth and expansion of existing operations. They will also allow the lifting of Dade County code restrictions prohibiting industrial and commercial zoned land users served by an onsite well and/or septic tank from rebuilding.

■ **Cost**

Five million dollars will be invested in improvements to upgrade the water system. Required matching funds included \$3.8 million from the State of Florida and \$1.2 million from Dade County, for a total project cost of \$10 million.

■ **Projected Outcomes**

The project was intended to do the following:

- allow existing businesses currently not in compliance with the code to meet those requirements; and
- increase employment opportunities in the area, as the type and number of businesses increase due to the availability of adequate water service, fire protection, and sewage treatment.

■ **Results**

At the time of the fieldwork, the water and sewer lines were still under construction in the area. According to the project director, 85 to 90 percent of the project work was completed as of November 1995. Informal surveys conducted with 15 businesses along South Dixie Highway showed that targeted beneficiaries of the project have mixed feelings about its benefits. None of the business owners had a clear idea of who was funding the project nor were they aware of EDA's contribution to the project. Furthermore, they were all unsure as to who would ultimately pay for the construction and whether they would be assessed construction costs.

When asked if they were satisfied with the water and sewer line that would connect them to county services, eight of the business operators interviewed responded "no." The major complaints were associated with business and traffic disruption from the construction of water lines and other infrastructure.

a project is thus both timely and necessary. It has taken the burden of paying for project construction off of local businesses and residents in their attempts to recover from the disaster event. The contracts officer of Dade County noted that had EDA assistance not been received for this project, the "project area would have deteriorated over time."

■ **Creating Networks and Partnerships**

One of EDA's goals is to promote economic partnerships and networks. The project director confirms that because of EDA input, their organization has formed some new linkages and strengthened old linkages with organizations after the disaster. The Contracts Office of Dade County now has more contact with the County Office of Community Development, and indirectly with the local Chambers of Commerce and the development organization, the Beacon Council. This has led to "better planning to anticipate the needs of the community as a whole." It has also given "recognition of the connections between and among actions of private and public agencies."

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In an interview with the contracts officer for Dade County, the following summary points were made:

- The performance of EDA for Metropolitan Dade County Miami Dade Water and Sewer

Authority Department was rated as "outstanding."

- The department was satisfied with the level of monetary assistance provided by EDA.
- The rate of success of this project based upon its original projected goals was rated as "outstanding."
- The "personal involvement of a limited number of EDA representatives who knew their work" was a major factor contributing to the success of this project.
- In the long run, *the EDA assistance will create higher property and resale values in the project area and will increase the flexibility and ability for business expansion.*
- The project director "strongly agreed" that the EDA-assisted project will increase jobs in the area, improve the local economy, create new economic opportunities, bring new business to the area, and bring new residents to the area.
- EDA's assistance has also helped this organization make the local community more aware of disaster issues.

Summing up the projected benefits,

- business expansion will be allowed;
- water will be safe to drink, as contamination from septic tanks is eliminated; and
- the loss of businesses to the area will be offset as new business is developed.

■ **Leadership**

The development of this project, handled by the grants officer for the County water and sewer department, was outstanding—from the planning stage through the awarding of the grant. Beyond this stage, some problems were noted from construction impacts of the grant and lack of communication between businesses in the affected

Problems raised by the construction included the following:

- “Constant road problems, many accidents, inconvenience.”
- “Stopped business progress.”
- “EPA giving business a hard time in getting building permits.”
- “Street construction has brought business to a standstill.”
- “Construction not completed, disruptive.”
- “Have dug up road in front of store 28 times over six months, business disrupted.”
- “Have put a service hookup in the middle of driveway entrance—3-foot high posts present obstacles to trucks coming in for produce.”
- “Construction has disrupted business.”

These short-term impacts are clearly related to the construction phase. They do not reflect on the potential long-term benefits of the project. On the positive side, 7 out of 15 of the businesses were satisfied with the project. When asked why they were satisfied, the following four responses were elicited:

- “Will permit us to switch from well water to treated water and to go to use of public water and sewage from septic tank.”
- “Will improve sewer system.”
- “Will allow for leasing of undeveloped property.”
- “Will be good for future development.”

One business that was particularly happy with the chance to get county water service was a day-care center located two blocks off the main highway. They were pleased because it would allow them to better guarantee the safety of the water for children in their care.

The responsibility for the actual construction of the water and sewer line is not under the supervision of the director of the EDA project funds for Dade county. The division of contracting and highway construction is the entity responsible for building activities over the six-month period of construction. Thus, it is difficult to blame either EDA or the project director for negative construction impacts.

Some disruption of business and services is inevitable with the construction of a major water line. The negative short-term impacts must be weighed against the long-term development benefits of such a project. When asked who would benefit most from this project, the project director replied business and property owners, and surrounding residents as business interests expand and diversify. South Dade County is an area of very rapid growth. Anticipated changes to the area will include a transition to commercial development and residential growth and a decline in the agricultural sector. New jobs will be created by this diversification and expansion, while some traditional agricultural jobs will be lost as land use patterns change.

For the local communities of Princeton and Naranja, the more diverse work force coming with the new businesses will lead to the need for more housing starts in the area. Expanding businesses will also link South Dade County to the rest of Florida.

Despite the six months of construction activity on the project, it is being completed within the time frame originally set in the grant proposal. *The project director states that the project could not have been realized without EDA assistance.* One month before Hurricane Andrew, a vote was taken of businesses and residents in the impact area as to whether they would partially pay for such a water system improvement. It was voted down as too much of a financial burden on the small businesses in the area. The EDA funding for such

area and the County. Lack of communication is the result of an organizational process whereby the county let construction contracts, and workers fulfilled those contracts without any apparent short-term business impact assessment.

The project construction component was missing a communication link between the project development and project implementation. The long-term goals of the project, as well as the short-term costs and benefits, were not made clear to the businesses in the development corridor. Consequently, local businesses were not encouraged to be a part of the process because of the lack of effective communication.

■ **Summary**

The Dixie Highway water and sewer project filled a development need of this portion of South Dade County that could not have been undertaken without EDA assistance. The long-term benefits of this project are projected as an improvement in commercial water access and subsequent business development for this area, with secondary effects of increased housing development in the surrounding area. Negative impacts could include the loss of agricultural productivity and businesses as the surrounding land is suburbanized.

Miccosukee Water Project

■ *Description of the Project Area*

The Miccosukee Reservation, situated in the heart of the Florida Everglades, is isolated from the development corridor of Miami and Metro Dade County. The reservation is located on two separate parcels of land: a 3-mile by 500-yard strip of National Park Service (NPS) leased land along the Tamiami Trail and 78,000 acres of undeveloped Federal Trust land along Alligator Alley.

The Miccosukee Tribe is recognized as one of the most traditional tribes in North America. Since formal recognition in 1962, the Tribe has managed to sustain a modest tourist-based economy along the Tamiami Trail. However, lack of tourism infrastructure and isolation of the reservation has inhibited the development of the area.

Isolation and underdevelopment has led to chronic unemployment for the Tribe. Since 1991, the overall unemployment rate has remained at 38 percent and underemployment is a serious problem. Approximately 28 percent of employed tribal members are at or below the Federally established poverty level. Business and tourism traffic has gradually declined on the Tamiami Trail, with a corresponding reduction in revenues and income to the Tribe. Traffic patterns across South Florida have shifted north from the Tamiami Trail (U.S. 41) to the recently completed I-75 Alligator Alley East-West corridor, stretching from Fort Lauderdale to the Florida west coast.

Although the Tribe's development options are limited because of their location within the environmentally sensitive Everglades National Park, they hope to capitalize on the economic opportunity afforded by having the only interchange access on I-75 connecting Florida and

Naples. Developers of the industrial/commercial properties have expressed interest to the Tribe in the I-75 location.

■ *Local Hurricane Impacts*

When Hurricane Andrew destroyed much of South Florida, the Miccosukee Indian Reservation was not spared. Recreational facilities, businesses, and chikees (homes) were damaged or destroyed and wind-blown debris was strewn about. Property damage was estimated at over \$3 million, leaving many tribal members homeless and without sources of employment and income. Tribal operations and tribal enterprises were shut down for almost two months. Many of those tribal members employed by tribal enterprises or other private-sector employers remain unemployed or underemployed (Jessel, *A Study of the Impact of Hurricane Andrew on the Miccosukee*, 1995).

Everglades National Park, the primary tourism attraction in the area, suffered extensive damage, and was closed for many months after the hurricane, furthering the decline of the tourism-based economy. Managers of the tribal enterprises noted that the sharp decline in tourism traffic and visits continues today. This Hurricane Andrew-created economic decline is compounded by the completion of the turnpike that provides an alternate route to Naples and Tampa from Miami. The permanent loss in employment in the aftermath of the disaster from tribal enterprises alone has been projected at twenty percent.

■ *Project Description*

This project will provide infrastructure for commercial and residential potable water. These include a small water treatment plant, a 200,000-gallon water storage tank and tower, and 15,000 linear feet of 6" water distribution lines.

■ **Project Cost**

The total cost of this project is \$1,000,000.

■ **Project Purpose**

This project is designed to provide necessary public works to facilitate the industrial/commercial and residential development of the Tribe's 78,000 acre Alligator Alley Federal Reserve.

■ **Projected Benefits**

The creation of infrastructure for a potable residential and commercial water source on the I-75 exchange will enable the Tribe to

- build up to 45 new housing units on the project site;
- use water resources to develop agriculture adjacent to the site;
- create a recycling and waste disposal unit with the water resources at the site;
- attract light manufacturing, tourism, and recreational development to the site; and
- construct a previously planned industrial park.

Although there is no estimate of the number of jobs that will be created by this project, it is expected to create permanent jobs for many of the 245 members of the tribal corporation at a time when considerable employment opportunities have been lost.

■ **Project Delays**

At the present time, the project is still in the planning stage. Delays in the project have been blamed on the previous tribal planner, whose actions and subsequent resignation delayed project initiation. There have also been problems with flooding at the project site over the last year, which has further delayed start-up.

The new tribal planner has received the commitment of the tribal council to proceed with the project. They have completed the designs for the various construction required, and are about to bid on the water tower construction. It is expected that bids for the water line and water treatment plant will be completed in a month and forwarded to EDA for approval.

Although the project has not leveraged support from a wide range of outside agencies, the Indian Health Service has contributed approximately \$300,000 to begin construction on the Alligator Alley site. *At the present time, they have completed four houses.* The Indian Health Service has also committed to fund the extension of the EDA water distribution lines to serve the Indian housing.

Unintended impacts of the recovery included conflict with outside relief agencies that led to delays in the delivery of post-disaster assistance (Jessel 1995). This can be accounted for by differences in the culture of response between the tribal community and representatives of relief agencies. These differences led to a breakdown in effective communication, and the ejection from the reservation of at least one agency official. This could have been avoided by the utilization of experts in the field of disaster relief to facilitate the communication between the Miccosukee culture and various relief agencies. There was no problem encountered by the EDA in its contact with the Tribe. However, problems with other agencies could have contributed to the delays in implementation of the EDA project.

The overall satisfaction with EDA by the Tribe and its representatives has been very high. The tribal planner made the following points:

- The support of EDA is vital to the future of the Tribe and to their economic development.
- The Tribe was satisfied with the timeliness of EDA's response.

- The overall performance of EDA in providing post-disaster assistance was rated as “excellent.”
- The Tribe was very satisfied with the level of monetary assistance provided by EDA.
- The success of the project based upon its original goals was rated as outstanding.
- Once the project begins, it will initially create construction jobs and later other types of jobs.
- Once the project begins, the tribal planner strongly agrees that it will do all of the following:

- save jobs in the area;
- increase jobs in the area;
- improve the local economy;
- improve the regional economy;
- create new economic opportunities;
- bring new business to the area;

increase community participation in economic recovery; and

create new economic organizations and networks.

- The project will create better living conditions for the Tribe and improve overall development.

■ **Leadership**

As noted, there were delays in the project that can be partly accounted for by a lack of leadership by the original tribal planner who later resigned. Original plans prepared by the architect were rejected because they were too expensive. Another architect was hired, and the plans are now under review by EDA. There was also a problem with the project site, in that it was flooded over most of the past year from heavy rainfall. It is anticipated that there will be progress on the Miccosukee project in the upcoming year. However, it is still too early to tell if the change in leadership and the approval of new project plans will lead to effective progress in the near future.

Seminole Historic Village Project

■ *Description of the Project Area*

The Seminole reservation is inhabited by tribal residents who are primarily employed in jobs related to tourism, the making and selling of their arts and crafts, cigarette sales, chikee buildings (Seminole traditional homes), and Bingo games. In 1991, the Tribe's unemployment rate stood at 30 percent, and 45 percent of the tribal members who were employed earned wages at or below the poverty level. In 1995, both percentages are the same.

■ *Local Hurricane Impacts*

The overall reduction in tourism that South Florida experienced after the hurricane adversely affected the Seminole Tribe. Hurricane Andrew destroyed many of the shops in South Dade County that sold Seminole arts and crafts to tourists. Tribal members who produced these goods lost the means by which they made their living.

■ *Project Purpose*

This project would provide funds to renovate existing buildings and to install the infrastructure necessary for commercial and tourism development on the Seminole Reservation. The original project description also provided for the renovation of two existing buildings and construction of infrastructure for a plant and tree nursery. It would also include the construction of infrastructure for a historical "Living Indian Village" as a tourist attraction. The village, according to the project description, would create 75–100 jobs and the nursery would create 40–50 jobs. Also, since the Tribe does not have its own outlet in which to sell its products, the village would create an outlet for Seminole arts and crafts.

■ *Project Cost*

EDA would provide \$1 million and the Seminole Tribe would raise \$356,000 for completion of the project.

■ *Project Status*

According to the tribal planner, no EDA funds have been spent yet. The Tribe has spent \$350,000 of its own money on the plant and tree nursery, and are planning to use the full \$1 million EDA grant toward the village. The grant was written so that EDA funds could be used once a contract is awarded for construction of the village. Since the village has not yet been started, no EDA funds have been spent.

The Seminole Tribe had a village in the mid-1960s, which was closed in the 1970s because it "wasn't doing so well." It was getting a lot of competition from Disney World. The tribal planner thinks the new village will do much better.

The tribal planner said that a committee of 10–12 tribal members was formed to explain to an architect what their "vision" for the village was. The first architect came up with a \$3 million plan that he said was too "Disney Worldish." This first set of plans involved changing the site's existing landscape by filling in an existing pond and creating another one on a different section of the site. This was part of the reason the proposed village was so expensive. The Tribe found another architect whose plans have been approved. This set of plans uses the existing pond on the site and builds the village around it. The village will have a museum, a gift shop, an alligator wrestling pit, and several Seminole *chikees* (traditional houses). It will be located on 4½ acres of reservation land off Route 441.

The final cost of the current plan for the village is an estimated \$1,600,000. The planner stated that

the Tribe has agreed to pay the \$600,000 over the \$1 million EDA has offered, but said he would look for outside money before using tribal funds. He said they would select one of two contractors they have found to do the actual construction of the village and hopes to award the contract by January 1996. Both contractors have guaranteed completion of the village in five months, with one more month needed for the Tribe to do their artwork and decorate the village, and to build the chikees.

■ **EDA Response**

The tribal planner said that the Seminole Tribe has had an ongoing relationship with EDA and has worked with them on previous projects. He added that "I have nothing but praise for them." When he calls EDA offices, he gets return phone calls very quickly. He says they have been very helpful, and EDA staff members check up and offer help with any problems the Tribe may have. His contact with EDA is once or twice a month.

■ **Projected Impact of EDA Grant**

When asked about the projected impact the Indian Village would have when completed, the tribal planner said he estimated the creation of 50–100 jobs. He added that the number of jobs created will depend on how many hours the village will be open to the public (and the number of shifts they will have). The village will also provide a market for Seminole arts and crafts and will create jobs for Seminole artisans.

Although no EDA funds were used for a plant nursery, the EDA project plans included the development of a nursery as part of the overall project. This provided the impetus to go ahead with nursery development even though other aspects of the project had not commenced, and can thus be considered a secondary impact of the EDA project.

The nursery started after Hurricane Andrew is open and currently employs eight people. The wholesale operation started last year, while the retail portion opened in October 1995. Florida species (palms, hedges, and various flowering plants) are being sold in the nursery. They have started landscaping and plan to expand this area. They will also start a lawn maintenance service in the spring. The tribal planner said the Tribe planned to build the nursery before the EDA grant was awarded.

■ **Leadership**

Based on the criteria of effective leadership, this project scores low. However, the early lack of progress appears to be changing with the approval of new architectural plans for the village. There was some reticence on the part of the tribal planner to go into details on the lack of progress on the project. Differences in forms of communication between the Seminole leadership and outside government agencies can account for some of these differences. The experience EDA had over 15 years working with the Tribe had caused EDA to recognize certain sensitivities that must be addressed when working with Native American groups.

The present lack of progress on the project means that no jobs have been created or outside funds leveraged. The role of the tribal council in reviewing and revising the plans for the project indicates that community empowerment in the decision-making process is an important issue for the tribal leadership. This participatory decision-making process can be viewed as another reason that the progress has been slow on project start-up and completion.

■ **Summary**

The Seminole historic village project has been delayed by changes in architectural design and apparent cultural differences in the decision-

making process. An associated project, the nursery, was intended for EDA funding, but has proceeded so far without EDA expenditures.

Technical Assistance/Business Incubator Projects

Goodwill Building Renovation—Garment Manufacturing Training

■ *Description of the Project Area*

The Hurricane Andrew impact area included all of Dade County south of S.W. 88th Street to the Monroe County line. This area covers approximately 1,100 square miles. Dunn and Bradstreet estimates that 113,000 people were employed in the impact area in August 1992. The Goodwill Industries service area encompasses approximately half of the impact area. The economy in this area is dominated by agriculture, Federal Government (Homestead Air Force Base), tourism, service industries, and light commercial and manufacturing. Many of the residents in this area are low-income agricultural workers for whom Goodwill Industries provides a major source of inexpensive clothing and household goods.

Prior to Hurricane Andrew, Goodwill performed janitorial services in three federal buildings for the General Services Administration and operated commissary, janitorial, shelf-stocking services, and four food service programs for the U.S. Armed Forces. These services and the Goodwill store in the area employed over 350 people and generated approximately \$5.2 million in annual revenues for Goodwill.

Currently 95 percent of the clients fall below the federal poverty level. Most are minorities (Black, 33%; Hispanic, 44%), owing to the proximity to the inner city and low-income areas. Many are single mothers with dependent children. Others are affected by long-term welfare dependence and chronic unemployment.

According to the Division of Vocational Training Rehabilitation of the Florida Department of Labor and Employment Security, Florida's disabled population ranks third in the nation, numbering over 1.4 million adults. The unemployment rate among this population is 68 percent, compared to 8.1 percent of nondisabled. This represents an enormous social service and tax burden.

■ *Local Hurricane Impacts*

Hurricane Andrew had a devastating impact on Goodwill Industries. It lost three stores, its contracts at Homestead Air Force Base, and revenues from other functions that were temporarily halted. Many of those who relied on Goodwill for clothing and household goods left the area never to return, thus impacting the service base for the local stores. Overnight, the budget was cut in half, from \$10.8 million annually to under \$6 million, with the immediate result of depleting cash and working capital. To survive, Goodwill had to lay off 317 employees, 92 percent of whom were severely disabled. About 260 of those employees worked and lived in the South Dade County area. Many lost their homes, all lost their jobs, and all were traumatized.

In the first six days following the hurricane, Goodwill support staff and administrators managed to reach all of the 260 Homestead Air Force Base employees. They were provided food, water, shelter, and medicine. They were also counseled to help them deal with the post-traumatic shock of the disaster event, and to allow them to begin rebuilding their lives.

Initial relief efforts to help with clothing distributions in South Dade by organizations other than Goodwill went awry. Truckloads of clothing that went into South Dade ended up as soggy piles destined for landfills. Goodwill stepped in and offered its expertise in the sorting and distribution of clothing.

Dade County contracted with Goodwill to manage tons of clothing coming in from all over the U.S. Additionally, the one remaining Goodwill store in the area (Princeton) was converted to the Dade County Clothing Distribution Center. All nonprofit agencies could refer victims to the Center, where they could shop in a dignified manner. Goodwill also landed a contract with the State of Florida Vocational Rehabilitation Agency for Evaluation and Training for South Dade County. Such evaluation and training were standard in Goodwill's day-to-day operations of training and rehabilitation before and after the hurricane.

■ **Project Description**

Funds for this project will be used for building renovations and purchase of equipment for training programs and employment of low-income disabled and disadvantaged persons. The project will create 300 private-sector jobs within two years.

Table — Project Costs: Goodwill Industries	
Building Renovations/Improvements	\$1,000,000
Equipment (Training and Production)	\$500,000
Total	\$1,500,000

■ **Purpose of the Project**

The grant will allow Goodwill Industries to revitalize their operations and replace jobs lost during Hurricane Andrew. The focus of the project is to expand training and manufacturing capabilities to supply commodities to the U.S. Department of Defense. The goal is to create a large number of new jobs and foster economic development through training employment and placement into the local economy.

■ **Results**

It is clear from the project description that there were major impacts to Goodwill from Hurricane Andrew. The project funds were utilized in an effective and timely manner. They had to replace all the business lost from Homestead Air Force Base, and the options to recover from losses in the Homestead area were limited (i.e., the Air Force Base was destroyed). This is another example of the shock wave effect of the hurricane impacting outside the physically damaged area south of Kendall Drive. Since the Homestead area did not have the infrastructure for the placement of a major manufacturing operation, the only place where it was possible to recover a large number of the lost jobs and income was in the main Goodwill facility near Hialeah.

"This program takes people off social programs and puts them into the workplace."
Business manager - Goodwill Industries of South Florida, Inc.

The recovery project selected for EDA funding was the renovation of the main facility and purchase of equipment for the Defense Department garment manufacturing contract. Even before the hurricane, Goodwill was struggling to get this contract going because of a lack of funding for infrastructure and machines. The selection of a garment manufacturing operation was very strategic. Dade County, Florida, is the third largest production center in the United States of garments and related products, employing approximately 22,000 individuals in the production of apparel, footwear, and leather goods (*Dade County Facts, 1994*).

Apparel exports increased from \$275 million in 1985 to \$769 million in 1990. Imports grew from \$681 million to \$1,652 million during that same period. While demand for skilled garment and

sewing machine operators is high, the skilled labor base has not been significantly increased over the years. Originally, skilled operators came from Cuba and are now aging, while recent immigrants coming to the area do not have similar skills. Thus, training locals in garment and sewing machine operations is good for both the clients and local industry.

"There are two problems here in the Miami area that this EDA-funded program is going to help. [1] The first problem is we have a lot of disabled single mothers in the community—disabled mothers who have the capability of operating sewing machines. Once they get trained well enough, they will go into the regular work forces in sewing manufacturing. [2] Also the impact that we have here is a win-win situation because these individuals have been receiving some kind of financial government assistance through welfare or social security. We are able to break that cycle because not only are they not going to be drawing monies from these programs but they are going to be providing taxes from their salaries."

*Business manager, Goodwill Industries of
South Florida, Inc.*

The EDA funds appear to have been efficiently used in the renovation. For example, many of the "new" materials—including wall dividers, filing cabinets, and desks—were purchased second-hand and then refurbished. Facilities improvements included the following:

- upgraded classroom facilities, including new computers, chairs, and other improvements;
- an exercise room to strengthen and improve the endurance of workers under physical rehabilitation;
- modernized equipment for the manufacture of military garments, including a wide variety of specialized machines;

- installation of an air conditioning system in the main manufacturing area; and
- painting and repair of the overall facility, including upgrading of the main entrance and reception area.

The upgraded classrooms have been complemented by the hiring of extra instructors for classes in such subjects as computer operation, accounting, English language skills, and clerical training. The classroom serves as an extension of the Metro Dade County School System, and the instructors who work there are employees of the Dade County schools.

The air conditioning system was critical to the productivity and health of the workers. At times, the main work floor would reach temperatures of over 100°F, making it difficult, if not impossible, to continue to work in safety. This was the major complaint of clients in a focus group meeting.

The most dramatic addition was the new garment manufacturing equipment. Antiquated sewing machines have been replaced by high-tech ones, each with a different function in the garment manufacturing process. This is ideal for persons with disabilities, for the process of manufacturing is broken down into a series of steps, some complex and some simple, that need to be individually performed. Operators can be matched to steps in the process that suit their abilities. The equipment was designed to produce aprons for a local supermarket chain, army camouflage pants, navy caps, and memorial flags.

Clients start by sewing aprons to develop stamina and self-esteem. Steps involved in the production of these aprons are less complicated than other garments, and errors made in their production can be easily fixed. After the clients have built up their stamina, they are transferred to the more complicated tasks of making caps, flags, or pants. The fatigue pants alone require 79 separate operations to complete and are considered to be

highly complicated. The Department of Defense is very pleased with the work done by Goodwill.

"In February 1994, Florida International University requested a grant to study the garment industry for the Department of Defense. The principals on the grant were told that they would receive the grant, but only if they included the Goodwill operation. According to the FIU researchers, they were told that the garments produced by Goodwill were the very best quality of all their contracted manufacturers, and that 'they wished they could produce more for them [if their production capacity was increased].'"

*President, Goodwill Industries of
South Florida, Inc.*

The start-up costs and learning curve for making the garments (3 years) was greater than expected. However, the EDA grant allowed for the speed-up of the operation. The economic impacts, realized and projected, of this project are shown in Table 8 (1993 is the first project year represented in this table).

The project has put 300 clients back to work, in effect replacing the number of jobs lost from

Hurricane Andrew in the Homestead area operations. In addition, numerous individuals have graduated from the training programs and been placed in employment in the community. For example, in 1994, 702 people were placed in jobs including those represented in Table 8, and in other positions. Job placements so far in 1995 have also been good. The impact of the EDA-funded project will result in a sustainable improvement of training and employment in the most needy population—the disabled—for years to come.

Besides the direct benefits described above, there has been a major leveraged impact from the EDA project. The *Miami Herald* needed space outside their main facility to manage the insert operations for their Sunday edition. Hearing of Goodwill's success in the garment manufacturing operation, they contacted them. They were impressed that Goodwill was managing such a complex operation with high standards of quality control. They then negotiated a contract with Goodwill to place all of their newspaper inserts. This resulted in the following:

- a 13-year contract for 1.3 million newspaper inserts weekly;

**Table 8 —
Goodwill Industries of South Florida, Inc.
Project Economic Impact/Benefit Projection**

Year	People Benefited				New Earnings Created			New Federal Taxes	
	Annual Employment	Annual	Cumulative	Grant Total	Employment Earnings	Placement Earnings	Total Earnings	Tax Rate	Total
1st.	150	—	—	150	\$950,000	—	\$950,000	15%	\$142,500
2nd.	300	—	—	300	1,900,000	—	2,850,000	15%	427,500
3rd.	300	150	150	450	1,900,000	950,000	5,700,000	15%	855,000
4th.	300	150	300	600	1,900,000	950,000	8,550,000	15%	1,282,500
5th.	300	150	450	750	1,900,000	950,000	11,400,000	15%	1,710,000
6th.	300	150	600	900	1,900,000	950,000	14,250,000	15%	2,137,500
7th.	300	150	750	1,050	1,900,000	950,000	17,100,000	15%	2,565,000
8th.	300	150	900	1,200	1,900,000	950,000	19,950,000	15%	2,565,000

Source: Goodwill Industries

- a \$625,000 investment by the *Miami Herald* to renovate the first floor of the main building (clothing distribution operations were removed from this space to the regional stores, where local customers would now buy local donations);
 - installation of \$6 million in equipment for the insert operations; and
 - creation of 150 new Goodwill jobs to run the 24-hour, 7-day-a-week operation.
- Goodwill was “very satisfied” with the efficiency of EDA’s procedures.
 - The amount of financial assistance was appropriate and manageable.
 - He concluded, “We were very impressed with EDA staff professionalism, knowledge, and commitment. I cannot think of anything that could be improved on this agency and its staff.”

This operation started with 130,000 inserts in September, and is now up to 1,300,000 (all of the newspapers printed). Thus, the \$1.5 million EDA investment in Goodwill has been leveraged into an additional \$6,620,000.

■ **Leadership**

The leadership exhibited under this project was outstanding. The president of Goodwill and his support staff were able to maximize the benefits of the project to their employees and clients by achieving effective progress and substantial leveraging of secondary resources.

In an interview with the President of Goodwill Industries of South Florida, Inc., the following points were made.

- Through vocational training and employment in Goodwill Industries, the EDA-funded project allowed the industrial sewing program to move a steady stream of skilled workers into the local garment industry where a labor shortage exists.
- In addition to the production area renovation, other building additions and renovations to increase capacity and efficiency were provided by the grant. Additional classrooms, office space and conference rooms were built or renovated to accommodate increased activities in the agency’s rehabilitation program in evaluation training, counseling, job readiness, and job placement. *This resulted in a capacity to expand existing funding sources and to attract new funding entities for the rehabilitation program.*
- The performance of EDA for Goodwill was rated as outstanding.

Leadership was apparent in the completion of the project within the given time frame, the stretching of project resources to maximize renovation benefits for employees, and the satisfaction of the DOD contractors with the military garments and memorial flags. *The leadership presented in this project should be considered a model for other EDA post-disaster training projects.*

■ **Summary**

The EDA Goodwill project has been very successful on all development criteria. Leadership, leveraging of resources, stakeholder empowerment, job creation, and effective progress have all been achieved under this project. The results have been so outstanding that the training program is touted as a model by the National Goodwill Headquarters, and has been frequently visited by Goodwill directors from other cities seeking to improve their own operations.

This project particularly demonstrates the importance of effective leadership to project success, as well as the importance of including

training capacity as an element of economic recovery. Occupational training, job creation, and stakeholder empowerment were not the focus of EDA expenditures, but rather the outcomes of an effective EDA renovation of the existing facility.

Tools for Change

Tools for Change is a nonprofit community development organization, headquartered in the historic district of Overtown. Its mandate is to provide technical assistance to the minority, small business sector in the Metro Dade area.

■ *Local Hurricane Impacts*

Most of the businesses that Tools For Change assists are in the impact area south of S.W. 88th Street. Prior to Hurricane Andrew, this area had approximately 8,000 businesses, employing 123,000 people with a total income of \$4.5 billion. As of October 1993, more than a year after the hurricane, over 70 percent of these businesses were back in operation. However, in the most severely impacted area south of 152nd Street and the Monroe County line, only 30 percent of these businesses had reopened. As of today, the area is still economically depressed but recovering.

Many of the businesses in this area are minority-owned, and many in the minority population are seeking to restart an old business or begin a new one. One barrier to recovery is that most minority-owned businesses were undercapitalized, uninsured, or underinsured when the hurricane hit. They have experienced great difficulty in obtaining the financing needed to reopen. As a result, many of the neighborhood commercial areas in minority communities remain closed.

■ *Project Description*

The project provided the technical assistance necessary to accelerate local minority participation in the redevelopment of South Dade County communities. Project components included early identification and negotiation for new minority business opportunities anticipated in the economic development and recovery of the area; and business planning, loan packaging, consulting, and support monitoring for start-up operations.

**Table 9 —
Project Costs: Tools for Change**

EDA	\$550,000
Local	\$0
Total	\$550,000

■ *Purpose of the Project*

The purpose of this three-year project is to provide technical assistance to small minority businesses in South Dade County to facilitate and accelerate their integration into the entrepreneurial development activity anticipated in the recovery process. The extended time frame for recovery from almost total physical devastation created a window of opportunity for minority-owned businesses to become a greater part of the economic fabric of the new South Dade.

During the first year, the project also attempted to address problems associated with inadequate access to capital for minority businesses through the development of a minority bank or other funding sources. This additional source of seed capital is needed to finance minority businesses to compete for new business opportunities outside their communities and to successfully revitalize hurricane-damaged commercial areas within their communities.

■ *Projected Outcomes*

It was anticipated that Tools for Change would, by the end of the project, help minority entrepreneurs (1) retain, stabilize, and strengthen pre-storm businesses; (2) establish new, high-quality businesses with attention to the "mix" of retail, commercial, and industrial activities appropriate for the economic competitiveness of the area; (3) substantially increase the minority job opportunities in the area; and (4) increase participation of local banks in financing of small minority-owned businesses in the target area.

"In helping small businesses obtain loans, we (1) prepare the presentation in a way that the lender will accept, (2) will work with the client throughout the loan securing process, and (3) will work with the client once the loan is in place to provide them with ongoing technical support. This is so the bank does not have to go back to the client—they can come to us. If it is a legal, marketing, or loan issue, they can go through a variety of individuals on our staff to respond to the problem. We also do a managing audit to determine if there is a problem—to determine what kind of internal controls you have so you can operate more efficiently. We are there to work with you in any stage of the process."

Director, South Dade
Office of Tools for Change

- *Financial Assistance*—prepared business plans, evaluated a business' feasibility, packaged and facilitated business loans, contracted financing, and obtained bonding.
- *Commercial Development Guaranty Fund*—provided guaranties for business and real estate loans approved by banks.

As of September 1995, the \$550,000 EDA grant has allowed the Tools for Change staff to leverage over \$16,000,000 in loans for minority-owned businesses in the impact area. There is also another \$1,560,000 in loans pending. Only one loan, amounting to \$150,000, has been denied.

Source: Tools for Change Monthly Business Development Client Intake Summary

■ Results

Tools for Change has utilized the EDA funding as salary support for staff. These staff have provided technical assistance and training to a wide variety of established and new small business owners in the impact area. They have been instrumental in securing loans for many of their clients, and for providing the follow-on technical assistance that allows their businesses to prosper. These staff have concentrated their efforts on South Dade, providing marketing, legal and financial assistance to small businesses and intensive technical support to community-based organizations involved in commercial development projects. More specifically, the services that have been provided include the following:

- *Legal assistance*—provided advice and counsel on a variety of legal issues relating to business formation and operation.
- *Marketing Assistance*—helped prepare bid packages, certify businesses with government agencies, and identify private-sector business opportunities.

As of September 1995, the EDA-funded staff of Tools for Change has provided technical training and assistance to over 140 minority-owned businesses in the South Dade area. They have given them technical assistance which consists of the following:

- advice and counsel on economic development issues;
- tutorial services;
- business license applications;
- loan budgets;
- assistance in obtaining minority certification;
- needs assessments of working capital and expansion of workplace;
- feasibility and financing studies;
- preparation of an RFP for the City of Miami;
- assistance in grant writing; and
- securing loans for businesses in the millions of dollars.

Another aspect of the Tools for Change activities under the EDA grant has been to work with community organizations to build coalitions for economic change and development. Tools for Change has used its expertise and resources to facilitate networking among community groups and City of Homestead government agencies.

"Tools for Change does not focus on any one ethnic group. We provide assistance to anyone who walks in the door—particularly in the South Dade County area. One of the key things we are about is coalition building."

Executive Director, Tools for Change

Tools for Change has worked as a referral service identifying alternative sources of funding and technical assistance, such as micro-lending programs. For example, they support a group known as "Working Capital—Funds for Self-Employment." This organization has established a peer lending program, such as those developed in Bolivia and Bangladesh. Groups of five to seven individual business owners are brought together by Tools for Change and Working Capital on a regular basis to learn how to set up a business and take part in information seminars. The group dynamic is important to the success of the process. The peer lending aspect means that if one member of the group does not pay back, the others will not be able to get another loan. After several tutorials, the group is able to apply for a loan from Working Capital. The loans are based on a tiered process. The first loan that they can apply for is \$500, and the amount goes up to \$5,000.

This is a two-year program. Tools for Change's role is to train, assist, and fund *enterprise agents*. An enterprise agent is someone who (1) identifies eligible business groups and (2) helps them move forward with the loan process. The focus is on people who live in housing projects.

This program is important for small businesses with little capital. Most banks will not provide a commercial loan of less than \$20,000. This allows Tools for Change to help set up businesses that will provide clients with a modest living and their community with new products and services.

The original EDA grant has supported staff while they secured grants from the State of Florida Hurricane Andrew Fund and from Dade County. As the EDA funds are expended, other resources are being leveraged to maintain the salaried staff that have been so successful in their efforts since the hurricane.

The "Incubator Without Walls" is an example of partnership-building fostered by Tools for Change. This project involves the Haitian Organization for Women (HOW) and Metro Dade Community College (MDCC) Homestead Campus. In the South Dade area, many poor minorities have attempted to run businesses out of their homes which are, in effect, illegal under county ordinances. They function primarily as a means of household survival. Self-employment is the primary issue, not high profits.

One of the other EDA grants discussed in the final report, has funded the development of a small business incubator on the MDCC Homestead Campus. This incubator focuses on high-tech small businesses that are already established and in need of additional technical assistance to succeed. The incubator cannot, therefore, serve the needs of the poorer entrepreneurs—not at least until they can establish themselves in some "place of business" outside their homes. In cooperation with MDCC—Homestead and the Office of Community Development, City of Homestead, the HOW has obtained space in a building to initiate a small business "incubator without walls." It will provide a common space, shared secretarial services, and technical and instructional assistance from professors and advanced students from MDCC Homestead. HOW has also received a

Tools for Change has established networks while assisting in a wide range of projects. Those with whom has formed partnerships in development include the following organizations:

Community-based Organizations

- ▶ Haitian Organization of Women
- ▶ Coalition of Florida Farm Workers Organization (COFFO); two offices, one focuses on Haitians and the other on Hispanics (Guatemalans, Mexicans, El Salvadorans, and Nicaraguans)
- ▶ Covenant Community Development Corporation
- ▶ South Dade Association of Rental Property Owners
- ▶ Coalition of Homestead Neighborhood Groups
- ▶ South Dade Alliance for Economic Development

Social Service Agencies

- ▶ Christian Community Service Agency
- ▶ South Dade Haitian Network, which represents and is made up of organizations that provide services to Haitians in the South Dade area

Networking Contacts

- ▶ Miami Dade Community College Homestead Campus
- ▶ Homestead Chamber of Commerce
- ▶ Homestead Economic Recovery Office
- ▶ South Dade Adult Center
- ▶ Jobs for Miami
- ▶ Local banks in Homestead; Barnett Bank; First National Bank of Homestead
- ▶ City of Homestead Revolving Loan Fund

small grant from the state that will provide “graduates” from the “incubator without walls” with seed capital to help them establish themselves in the business community.

In an interview with the Executive Director of Tools for Change, the following points were made:

- The EDA site team was highly professional and sincere in its efforts to assist in the Tools for Change staff with project development.
- EDA’s performance while working with Tools for Change was outstanding.
- Tools for Change was “very satisfied” with EDA’s efficiency and timeliness in providing disaster assistance.
- The client was also “very satisfied” with the level of monetary assistance provided by EDA.

■ **Leadership**

As with the Goodwill project, leadership of the Tools for Change project was outstanding. The executive director of Tools for Change had over 20 years experience in urban planning, as well as experience directing other EDA projects. Her effective leadership style was reflected in the competence of the project staff in empowering clients by securing loans and delivering technical assistance. By dividing up the responsibilities among staff in particular areas (accounting, loan processing, etc.), the project director ensured the quality of the grantee’s technical assistance.

■ **Summary**

Tools for Change has been very successful at securing loans and providing technical assistance for their clients. They have also actively promoted partnerships with development organizations, including the “incubator without walls” effort co-sponsored by the Miami Dade Community College–Homestead Campus.

Overall, this project is rated as outstanding in all characteristics that make up the Development Quotient.

City of Hialeah International Technology and Productivity Improvement Center

■ *Project Description*

The project will rehabilitate and convert a manufacturing facility for use as a training and research center for the transfer of manufacturing technology to both new and established companies. The project will include the construction of classrooms and laboratories for computer controlled robotics and related modifications.

■ *Project Cost*

The project will cost \$1 million for the renovation, with additional funding leveraged from the city and state.

■ *Project Purpose*

This project will address some of the major elements of economic crisis in the City of Hialeah resulting from the in-migration of people as a consequence of Hurricane Andrew and the secondary economic disasters it spawned in South Dade. The project will facilitate the development of a center to promote the rapid and widespread use of the latest manufacturing technology among small and medium-sized companies in South Florida. Concurrently, the center will provide training in the latest production technology to the local labor force for jobs in the new manufacturing marketplace.

■ *Description of the Project Area*

Hialeah's economy is very diversified, and has changed considerably since 1972 when manufacturing jobs accounted for 58 percent of all employment. Service sector jobs now account for over 75 percent of total employment. Still, the City has the greatest concentration of manufacturing jobs in the Metro-Dade area. Thus, a development project that emphasizes new industrial

technology is very appropriate to the local economy of Hialeah.

The types of industry includes apparel, textiles, chemicals, fabricated metals, food and related products, furniture and fixtures, printing and other publishing, electric and electronic equipment, rubber and plastics fabrication, and miscellaneous manufacturing.

As of December 1992, the City's unemployment rate was 9 percent of its civilian labor force of 97,000. The labor force includes the highest concentration of foreign residents of any place in the United States. This manufacturing sector is linked to an international market that is highly competitive and constantly changing. This requires continuous restructuring and retraining to keep pace with employment needs and to keep local industry competitive. Expansion of the manufacturing sector in Hialeah offers job opportunities for the burgeoning population.

■ *Local Hurricane Impacts*

The exodus of homeless and jobless from South Dade in the aftermath of Hurricane Andrew had a significant shock wave effect on Hialeah. Overnight, some 8,000 new residents appeared and stretched the limits of housing and social services in the City. Displaced persons arrived from Homestead, Kendall, Naranja, Perrine, Cutler Ridge, and other areas. Hialeah is presently the most overcrowded city in Dade County with more people per household than any other city. Hialeah also has more people per square mile—8,890 compared to the county average of 990. There is a vacancy rate of one tenth of 1 percent in the City. The overcrowding in the City creates an additional permanent increase in costs for which no funds have been provided. Thus, even though Hialeah was not on the direct path of Hurricane Andrew, it continues to suffer from the ripple effect of this disaster.

■ **Projected Impacts of the Project**

The industrial teaching factory will benefit the City as follows:

- act as a focal point for facilitating the transfer of new manufacturing technology to companies in South Florida;
- provide 200 initial jobs in construction and 3,000 projected jobs from industrial training;
- provide customized training programs for the local labor force to upgrade their skills and to accommodate the development of new manufacturing processes;
- operate automated production lines capable of manufacturing "parts on demand" and of being used for tests and research in the different types of manufacturing prevalent in the area;
- help ensure that South Florida has a stable and industrious manufacturing-oriented work force that can adapt and prosper in the new industrial environment; and
- relieve some of the unemployment problems cause by the influx of people from South Dade after the disaster event.

■ **Evolution of the Project**

The project start-up was delayed from the original period because of a variety of factors. In this case the delays turned out to be highly advantageous to the project. The original plan was to build something akin to a traditional business incubator, with the planning and direction for the project being locally generated. The problem with this plan was that there was not sufficient expertise and knowledge of external market conditions to attract new businesses and retool old ones. After some early delays the project initially consisted of the shell of a building donated by Coulter Industries. This 25,000-square-foot warehouse was refurbished, but there was a lack of consensus as to how to

achieve a "retooling of the manufacturing base of the community."

Another delay was caused by the 1993 City elections. After the elections, the mayor and city manager sought advice on how to best utilize the EDA funds and the donated Coulter structure. As the city manager notes, "Timing was important here. After the EDA funds were available, there was a delay in the development of the project. This can mostly be attributed to the turnover in the city administration at the time... We could have told EDA within the first six months that we were going ahead, but we did not know who was going to operate the facility, run it, or fit in the right industrial areas, or if the floor slab is strong enough to handle the kind of equipment that would go into the factory. If this had been done quickly, there would have been a waste of resources. We now have a facility that fits the needs of the training factory."

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After the mayoral election, The Beacon Council, a civic development organization, suggested that the City contact Fraunhofer USA, a subsidiary of Germany's largest applied-research company.

The Fraunhofer Institute joined forces with the city and began work on a technological marketing assessment. The goal of this assessment was to develop an understanding of the manufacturing base of the community. Fraunhofer conducted the research with the cooperation of Florida

International University and the grants coordinator/city manager of Hialeah.

Although their report will not be finished until January 1996, preliminary results indicated that there was a good diversity of businesses that could profit from the factory, and that it would draw in new businesses as well. For example, it was mentioned that Mercedes Benz may utilize the factory to start up a small parts operation in Hialeah to complement their Mercedes manufacturing plant opening up near Tuscaloosa, Alabama. Another example is a company that manufactures life preservers. They are moving to Hialeah and would like to use some of the space in the teaching factory to test some new technologies. They need people to do hands-on training, and would employ about 250 people in this facility alone.

Product contacts made so far for the factory include

- robotics in apparel industry—from clothing to bulletproof vests by changing programming for robotics software,
- packaging,
- sewing,
- automobile parts manufacturing, and
- life preserver manufacture.

The funds for this project are being accessed from a variety of sources, including HUD, local city funds, and staffing from Fraunhofer. However, the most important source of funds was noted to be the original EDA contribution. At the time they were awarded the EDA grant, they were negotiating a long-term lease with Coulter. However, when Coulter was informed that Hialeah had the EDA grant to refurbish the structure, they decided to give it to the City and take it as a tax deduction. This would not have happened if the EDA grant had not been in place.

Without these EDA funds, Coulter Industries would not have donated the building, and Fraunhofer would not have invested in the factory. The Fraunhofer investment comes to an annual operating budget of \$2 million.

The project manager for Fraunhofer noted that the number of employees at the teaching factory will depend on the type of technology that goes into the building. Most new jobs will not be generated at the factory, but rather at the developing and evolving businesses that take advantage of the factory. Once the review of local manufacturing needs is completed, Fraunhofer will set up a factory in the renovated structure where local manufacturers can encounter new technology. Each company can produce its own products at the site to determine whether the equipment offers significant advantages that justify purchasing the items. The factory itself will not produce any new products, and will be staffed by a group of German-trained manufacturing engineers.

"Hialeah is also the gateway to South America. The project will give us the ability to train people from there in the highest technology. Locally, we also have a lot of people who do motor repair, windows, manufacture of motor parts, aircraft and jet engine repair and refurbishing, and manufacture of computer processing units. This will be facilitated by the close rail transportation—the project is right behind the rail station. This will also allow expanded economic development into Dade and Broward County."

City Manager—Hialeah

The probability of success with Fraunhofer is considered to be very good. Fraunhofer has 46 technology institutes in Germany, and is establishing research centers in Boston and Ann Arbor, Michigan, and a teaching factory in Milwaukee.

■ **Developing Partnerships**

One of the goals of EDA is to establish partnerships through its development grants. This will be achieved in this case. The Hialeah site will be linked to Miami Dade Community College and Florida International University. As the city manager noted: "The project will reach through South Florida in the future." It should also provide international business connections with Latin America and Europe, and will act as a model for the teaching factory concept for other parts of the United States and the region. The city manager also noted:

"Hialeah is also the gateway to South America. The project will give us the ability to train people from there in the highest technology. Locally, we also have a lot of people who do motor repair, windows, manufacture of motor parts, aircraft and jet engine repair and refurbishing, and manufacture of computer processing units. This will be facilitated by the close rail transportation—the project is right behind the rail station. This will also allow expanded economic development into Dade and Broward County."

Another important aspect of the project is its training and educational value. For example, students at the University of Miami and Miami Dade Community College will be able to utilize the facility for training and educational purposes. Some correspondence between other universities stimulate other to emulate the program (outreach beyond immediate area of Florida). The dean of graduate studies at the University of Miami notes: "For our faculty, we would interact in transferring knowledge from academia to industry as well as working on problems in areas of technology... We envision it as a training opportunity for students as well as a way faculty could contribute to the community."

The facility not only represents a testing ground for innovative technology but provides training

The facility not only represents a testing ground for innovative technology but provides training opportunities for individuals who can then enter the specific manufacturing sector employing these very same technologies.

opportunities for individuals who can then enter the specific manufacturing sector employing these very same technologies. University participation has already been integral to project development. Professors from Florida International University were hired by Hialeah to oversee and coordinate project development. FIU will also use the facility to teach engineers, but the actual people who will be running the innovative technology equipment will be high school and junior college students. They will be supervised by Fraunhofer engineers company staff, and university faculty. For example, Turner Tech has already expressed interest in having students work and train at the facility.

"The people we dealt with from EDA were Boyd Rose, Kent Lim, and Lola Smith. Those three individuals were exemplary. They worked with us no matter what we asked of them—they knew we had something special with this project in particular—that it had the potential to be a model for the rest of the nation. EDA was the trigger mechanism for the whole project. They didn't just have an idea—what they had was vision."

City Manager—Hialeah

Throughout this process, the EDA was cited as providing outstanding support to the project manager:

"The people we dealt with from EDA were Boyd Rose, Kent Lim, and Lola Smith. Those three individuals were exemplary. They worked with us no matter what we asked of them—they knew we had something special with this project in

particular—that it had the potential to be a model for the rest of the nation. EDA was the trigger mechanism for the whole project. They didn't just have an idea—what they had was vision.”

The project manager made the following points:

- The EDA team members were highly professional and sincere in their efforts to understand the needs served by the project and to assist in project development.
- EDA's performance while working with the City of Hialeah was outstanding.
- The level of monetary assistance provided was satisfactory.
- The City of Hialeah was very satisfied with EDA's efficiency and timeliness in providing disaster assistance.

■ **Leadership**

Leadership for the Hialeah project came from the city manager and his staff. The city manager had many years experience working with development projects and previous experience directing EDA projects for the city of Hialeah. He was able to

successfully incorporate the Fraunhofer offer into the factory. His work with the Beacon Council and Coulter Industries leveraged resources for the project. By linking up with Fraunhofer, Coulter Industries, FIU, and others, the project manager effectively increased the job creation and business building capacity of the Teaching Factory project.

■ **Summary**

The Hialeah HITPIC project is just under way, with the delays due to changes in building codes, improvements in project design, and formalization of working partnerships. These partnerships and design improvements will substantially increase the long-term impact of the project for the City of Hialeah and the surrounding region. The factory should serve as a model for local industries to upgrade their productivity and for the creation of jobs as new industries are attracted to the area by the factory and established ones market new products after testing innovations in the factory. It should be emphasized that the factory itself will not be a primary source of new jobs. Most jobs will be created as businesses take advantage of the technical expertise and training the factory offers.

Center for Health Technologies

During the course of the evaluation, CHT requested that the EDA project be terminated.

The Center for Health Technologies (CHT) is a community-based, nonprofit organization whose goal is to foster economic development in South Florida through technology transfer. CHT is also an association of small, developing companies focused on a wide range of health-related products or processes. CHT assists in the development of new technology-based companies, with a goal of creating new jobs, especially for minorities who normally have few opportunities to enter technology-based industrial positions.

■ **Project Description**

The project's original scope was to provide funding to complete the renovations of a Health Technologies Incubator located in a 50,000-square-foot facility owned by the City of Miami. The building would have provided office and laboratory space to start-up health technology businesses. The EDA grant was \$1,000,000 and CHT was supposed to raise \$333,000 for the project.

CHT and the City of Miami had entered into a short-term lease, but in the end, both parties could not agree to the terms of a long-term lease. Also, it appears that the City of Miami was not willing to accept the risk of compensating EDA for the leasehold improvement provided for in the \$1 million EDA grant if the Incubator did not succeed. Under the terms and conditions of the grant, the City, as owner of the property, would be required to compensate EDA for the fair market value of the leasehold improvements if the lease with CHT were terminated before the end of the useful life of the EDA-funded improvements.

■ **Purpose of the Project**

The purpose of the project was to expand the capacity of the Health Technologies Incubator to enhance the development of new start-up health technology companies. By providing affordable space and a broad spectrum of services to these companies, the Incubator would help them develop into self-supporting health technology businesses. According to CHT, most companies graduate in 2½ to 3 years, while technical companies may take up to 4 years.

The revised project would have had a significant impact on increasing the number of new, skilled, long-term jobs in the Kendall area, an area severely affected by Hurricane Andrew. Jobs created would have helped to overcome the impact of jobs lost in this region due to Hurricane Andrew's destruction of local businesses. The proposed renovation and/or addition to the building located on the University of Miami's South Campus would also have created jobs during construction.

■ **Projected Outcomes**

Once the revised grant was approved, CHT estimated that the renovations would take 18 months to complete. (The University of Miami estimated one year to complete renovations and construction of an addition, and six months if it was only a renovation.) CHT said that out of their 25 affiliates, about 5–8 were interested in moving into the new Incubator.

CHT's Chief Operating Officer said that the community would benefit most from the Health Technologies Incubator because it would create long-term jobs and attract capital investment. He estimated the Incubator would create 1,500 long-term jobs over the next ten years. CHT also estimated that 80 percent of the businesses that pass through the Incubator would become successful health technology companies. These

companies would then relocate from the Incubator into the South Florida area and generate new jobs in the region.

Discussions with two of CHT's affiliate companies revealed that CHT was a valuable resource for networking support.

One affiliate company was a biomedical research, engineering, and manufacturing company that was developing orthopedic diagnostic, surgical, and treatment products. The company was started in 1987 and currently has two full-time staff members (with one other employee funded through a grant by the State of Florida). The owner said that his company was open before CHT formed and that he was actually involved in CHT's start-up. He has helped approximately three other start-up companies through an exchange of information. He thinks CHT adds to the cohesion of the health care industry in Miami. This owner had been on-site in the first Incubator while the lease with the City of Miami was being negotiated, but moved out when the lease fell through. He is currently located at the University of Miami's Jackson Medical Center and was unsure whether he would move into the new Incubator.

The other affiliate company, currently on-site at the South Campus location, was developing new reagents, specifically DNA/RNA reagents, for biological research. This company would serve scientific and industrial biotechnology markets, and would sell its products through direct mailings to researchers. The owner is the sole employee of the company, which he founded in July 1995. CHT was providing him with lab space, a fax machine, and a telephone. He said it would have been very difficult to open his company without CHT's help. The owner has already found a company to license and develop his products for the gene therapy market. The agreement includes an up-front sum and royalties. He foresees staying a maximum of 2 years in the

Incubator. This owner also said that when his company graduates and moves out of the Incubator, his company will stay in the South Florida area. He also mentioned that the current location is ideal for him, and since the building offers 24-hour security, he feels very safe working late and on weekends.

Both affiliate companies agreed that CHT offers good networking opportunities for professionals in the health industry. Their owners mentioned the once-a-month CHT Affiliate Roundtables and the Florida Venture Forums, which allow affiliate companies the opportunity to meet potential investors.

■ **Networking**

CHT offers its affiliate companies access to a large network of organizations in the Greater Miami area. These organizations include the Greater Miami Chamber of Commerce, the Beacon Council, the Broward Economic Development Council, the Florida Chamber of Commerce, the National Business Incubation Association, University of Miami, Florida International University, and CHT's corporate members.

■ **Project History**

The change in location of the Health Technologies Incubator would have affected the results that were first projected. For example, the creation of inner-city jobs would not have taken place. The first Incubator would have created highly skilled jobs for minorities in the Overtown area, an economically underdeveloped area with a large minority population and high unemployment rates. The construction jobs that would have been created in the Overtown area would also not occur.

Also, the first building was within walking distance of the health care and research facilities

at the University of Miami's Jackson Memorial Hospital Medical Center and other medical research centers/complexes, such as Cedars Medical Center and the Veterans Administration Medical Center. This complex would have been not only a prime resource for the affiliate companies, but a prime customer for the new health products and services developed by those companies. The new site was far from Miami's medical center. The new Incubator may also have housed fewer start-up companies than projected with the first Incubator. This capacity would have depended on EDA approval of plans to add on to or renovate the existing building on the University of Miami's South Campus.

■ **Leadership**

The leadership of this project was fair, but was compromised by the lack of cooperation with the City of Miami and the breakdown in contract negotiations with the University of Miami. The

project has been recently canceled, and no benefits will be realized for clients.

■ **Summary**

The CHT project was based upon using an established firm in promoting health technology businesses. However, the inability to secure favorable leases with the City of Miami and then the University of Miami for supporting facilities proved fatal to the project. A possible solution could have been the negotiation of the lease agreement as a proactive requirement for the approval of EDA funding.

Even though the CHT project was well planned, it suffered from a lack of cooperation from economic partners and a lack of leveraging by the project director. EDA's decisions to cancel this project is consistent with the Development Quotient score it received before this cancellation occurred.

Florida International University Small Business Technical Assistance Program—International Trade Focus

■ *Project Description*

The proposed project will be a program of training and technical assistance for businesses in the area most affected by Hurricane Andrew, which is defined as the area between S.W. 88th Street and Florida City to the south. The central focus of the program will be to assist in reconstructing the economic base of this area through developing international trade linkages for companies in the affected area and preparing companies inexperienced in international trade to do business in the global market place.

■ *Purpose of the Project*

The purpose of this project is to provide technical assistance through training and counseling to businesses in the affected area, specifically focusing on international trade. The preliminary goal is that 60 percent of the clients be minorities.

■ *Description of the Study Area*

The area of South Dade County targeted by this project had approximately 8,000 businesses, employing 123,000 people with a total personal income of \$4.5 billion. Most of these businesses are small employers. Sixty percent employ less than five persons each. The hurricane area targeted by this project represented approximately 12 percent of Dade County's \$38 billion personal income and 14 percent of the 878,000 jobs and 59,000 businesses.

■ *Hurricane Impacts*

In 1993, Florida International University did a study of the impact zone they would be targeting for this project. The affected area was divided into two sections as follows:

- **Area A:** south of S.W. 88th Street and north of S.W. 152 Street; and
- **Area B:** south of S.W. 152 Street to the Monroe County line.

The survey revealed that Area B suffered a greater negative impact than Area A because the base industries of government, agriculture, company headquarters, and manufacturing have greater multiplier effects. Area A had more reliance on small businesses such as retail stores and service businesses. Therefore, in Area A the rebuilding of the neighborhoods will reestablish the economic base.

By contrast, Area B businesses are not expected to respond as rapidly as Area A. Area B had greater building destruction, but more importantly, there was more destruction to the base industries—Homestead Air Force Base, Burger King Headquarters, American Bankers Insurance Company, and the agricultural sector—all of which still had not recovered their previous employment levels at the time of this survey. Thus, Area B not only lost jobs from its base industries but also lost jobs from the multiplier effect. *Consequently, businesses, especially in Area B, must seek other markets outside this area since their local market has been destroyed. This is why the international trade focus is so important to the recovery effort.*

The U.S. Department of Commerce reported that trade through Miami Customs District, which includes the airports and seaports from key West to Fort Pierce, rose to \$2.1 billion in July 1992. Up 12.3 percent from the same month of the previous year. In order to compensate for the loss to the economic base from the disaster, it is necessary that businesses in the area expand their markets. This could include foreign markets that are exporting opportunities; but equally as important are importing opportunities for those companies seeking products to sell and distribute in the United States.

■ **Project Impacts**

The project of the FIU Small Business Development Center (SBDC), was divided up into two activities: (1) individual counseling of small business owners and (2) open seminars for the business community. The focus in these activities was on developing linkages with the international trade market. Overall impacts include the following:

- Over the first 18 months of the project, FIU-SBDC has counseled 545 clients, surpassing their initial goal of 300 clients. This has been accomplished in part by careful utilization of resources and by the donation of technical counseling expertise by members of the SBDC.
- The SBDC has conducted 32 seminars in international trade and small business development. These seminars have been attended by 1,296 business people. This greatly surpasses their original goal of 18 seminars and a projected 450 attendees.

Informal surveys were conducted with five of the FIU clients: four small export businesses and a purchasing agent for a hotel. Exported products included (1) plants and seeds, (2) powdered milk and steel pigirons, (3) chemical products, and (4) electrical and automobile parts. The hotel purchasing agent exports cigarettes, alcohol, frozen poultry, and soft drinks.

In response to the question, "Did the assistance received from FIU make a difference?" all of the clients responded "yes." Assistance cited included help in starting in a new business (2 clients); help in procuring a loan (1 client); and opening new international business markets (2 clients).

One of the most important outcomes of the training project cited in interviews with project staff was the facilitation of trading linkages.

Finding trading partners, and then providing support information on how partnerships can succeed, has been one of the most important contributions of the program to client success and community economic recovery.

Finding trading partners, and then providing support information on how partnerships can succeed, has been one of the most important contributions of the program to the client success and community economic recovery. Information can include help in researching markets, identifying shipping ports, establishing letters of credit, and identifying potential trading partners. Clients also cited the individual care that they received from SBDC staff. They were generally not restricted in the number of times they could go back for assistance and counseling.

The SBDC of Florida International University has prepared a progress report for EDA. It covers the period from July 1, 1995, to September 30, 1995. During this period, the project grew beyond the original work plans. A wide variety of community resources have been leveraged in providing technical assistance and counseling to clients, and in the promotion of the international trade program. These include organizations, publicity events, advertising with community organizations, chambers of commerce, banks, agencies and consulates, and participation in trade shows.

Networking is part of the development activity encouraged by EDA as an integral part of economic recovery and development after a disaster. This includes \$14,500 in leveraged in-kind contributions for trade show booths. A total of 68 network contacts were made that cover the economic region of South Florida and five other nations, including Brazil, Colombia, Argentina, Great Britain, and Mexico. Important examples of significant activities over the last quarter from this period include

- participation in three trade shows—Florida International Restaurant, Hotel and Bakery, Florida International Medical Expo, and Export America;
 - discussion of international trade issues on a local radio station, which included call-in questions by listeners requesting information on international trade; and
 - the creation of a home page for the International Trade Program on the internet's World Wide Web, which should enhance exposure of the program across the nation.
- Exporting Opportunities in Latin America
 - Trading with the Caribbean
 - Assuring the Success of Your Export Business
 - Exporting to Latin America and the Caribbean
 - Exporting Opportunities for Small Businesses
 - Exporting Made Easy for Exporters
 - Trading with the Caribbean
 - Financing Your Export Business
 - Stake Your Claim in Trade

The hundreds of hours consulting over the life of the program have included follow-up visits with clients seeking further help. For example, in the third quarter, 13 clients participated in follow-up counseling for a total of 143 hours. Counseling was sought for expanding businesses, securing loans and distribution agreements, and export-import issues.

A wide variety of seminars have been taught under the program, reaching 1,296 clients who have attended. The seminars have included the following topics:

- How to Organize your Export-Import Business
- Financing Your Export Business
- Your Agricultural Products and the World Market
- Exporting Opportunities to Latin America
- Brazil Opportunities for Global Trade
- Letters of Credit
- Understanding NAFTA and the GATT
- Assuring the Success of Your Export Business
- Opportunities in the Latin American Market
- Trade Finance Resources for Exporters

The comprehensive coverage of international trade topics, as well as the numerous clients counseled, indicate that the SBDC has far exceeded the expectations outlined in the original proposal. Their effective use of EDA resources has provided a major boost to the growth and development of international business ventures in the disaster area.

The comprehensive coverage of international trade topics, as well as the numerous clients counseled, indicate that the SBDC has far exceeded the expectations outlined in the original proposal. Their effective use of EDA resources has provided a major boost to the growth and development of international business ventures in the disaster area. The extensive networking they have accomplished is also consistent with the goal of EDA to create partnerships in development. The evidence indicated that the SBDC of FIU has significantly improved international business development in the impact area. The "Phoenix Effect" has been achieved in this case, in that the benefits realized exceeded the original pre-disaster resources and level of international business development for the impact area.

In an interview with the project director, the following points were made about EDA:

- The overall support he received from EDA in project preparation and funding was outstanding.
- Without the assistance received from EDA, FIU could not have effectively supported international business development after Hurricane Andrew.

■ **Leadership**

Leadership for the FIU project was very effective at reaching a large number of clients and stretching the resources to realize the maximum benefits for the largest number of clients. The grant administrator directed his staff to maximize the effectiveness of funding by minimizing staffing costs and by reaching more clients than originally planned through leveraging of outside resources.

The number of clients counseled and the number of events sponsored and organized far exceeded the original expectations of the project. The

training infrastructure (including trained personnel, partnerships, experience) facilitated international trade development in the South Dade area, and empowered many businesses with vital technical knowledge that they then converted into new international businesses or improvements/expansion of existing businesses and capacities.

■ **Summary**

The FIU-directed project improved international business development in the South Dade area. This was accomplished through technical assistance counseling of businesses, sponsoring of international trade seminars and symposia, advertising of and participation in international trade events, and leveraging of outside funding for the promotion of international business development. Effective leadership maximized the grant resources keeping staff working longer than planned, resulting in a far greater number of clients served than anticipated.

Revolving Loan Funds

City of Homestead Revolving Loan Fund

■ *Description of the Project Area*

The economy of the Homestead area before the hurricane was based on agriculture, Homestead Air Force Base, seasonal tourism, and related industry and small businesses. The value of agricultural sales in 1989 was \$539 million. These sales provide a total economic impact on the community of \$910 million. The 1,623 farms and nurseries in Dade County utilize 83,000 acres of land and employ 23,068 full-time equivalent jobs. Almost all (99.7%) of this acreage is located in the hurricane impact area, and much of the agricultural support activity is served from Homestead.

Homestead Air Force Base contributed \$450 million annually to the local economy. Approximately 6,500 military personnel and their families were stationed at the base prior to the hurricane. More than 80,000 retired military personnel used the Base hospital and PX.

■ *Local Hurricane Impacts*

Hurricane Andrew destroyed or damaged some 8,000 businesses, 100,000 people were left unemployed, 200,000 people were left homeless, and Homestead lost 50 percent of its electrical customers. An estimated \$20 billion worth of property damage was caused by the storm, of which an estimated \$12 billion worth of claims was paid as of February 1993. Several insurance companies went bankrupt. As of 1993, business owners were still waiting to be compensated for their claims, many of which were subsequently covered by the Florida Insurance Guaranty Association, Inc.

The need to retain existing businesses, and attract new ones, was paramount to city managers and local stakeholders in the economy. Community leaders are seeking to create a mix of old and new businesses and to use larger projects such as the Homestead Industrial Park and the Motor Sports Complex to attract new light industry to the area. There was an initial loss of local residents and businesses, some of whom relocated to nearby areas such as Hialeah and Broward County. Some businesses that did receive insurance monies subsequently disappeared from the economic landscape.

■ *Project Description*

The project proposed the establishment of a revolving loan fund to assist businesses in Homestead to recover from Hurricane Andrew.

**Table 10 —
Project Costs: City of Homestead RLF**

EDA Share	\$2,000,000
Local (Waiver Recommended)	\$0
Total	\$2,000,000

■ *Purpose of the Project*

To establish a Revolving Loan Fund (RLF), which is urgently needed for job retention and job creation, both for (1) pre-storm businesses which have suffered substantial damage and loss, and (2) post-storm businesses responding to the attraction of the industrial or commercial parks, Foreign Trade Zone, Enterprise Zone, Homestead Sports Complex, and tourism development in the Homestead area.

■ *Results*

Initially, the RLF has focused on fifteen small business owners who had not been able to reopen because their insurance companies went bankrupt.

These businesses have a potential of providing at least 150 jobs. Many of the businesses are located in the southwest corner of the city, one of the poorest areas. To ensure these businesses have an opportunity to utilize the loans, the City of Homestead has aggressively solicited application from that section of the city. In the initial round, approximately 50 percent of the monies were to be utilized in this area.

The start-up of this project has been slow and the outcomes less positive than anticipated. The administration of the project is now under the Vision Council in Homestead, associated with the City Chamber of Commerce. The need to retain existing businesses, and attract new ones, was paramount to city managers and local stakeholders in the economy. However, according to the project director, there has been a problem in getting repayment of the loans from some of the clients.

It has also been difficult to get people in the target area of Southwest Homestead to respond to the solicitation for grant applications. People in the area are not used to receiving outside help, and have historically been undercapitalized and underinsured. In fact, many of the businesses in this area lost their insurance coverage because the insurance companies they dealt with were "high risk."

According to EDA staff, RLF loan officers were cautioned to be conservative with their lending in order to ensure repayment. In the past EDA has been criticized for loan programs that were high risk and resulted in low repayment rates.

The guidelines that the Vision Council uses in providing loans are

- present funds are utilized only when banks will not approve a loan (the funds do not compete with existing resources);

- to get approval for a loan, the business must submit a business plan as part of the loan application; and
- loan applications are reviewed by a committee appointed by the City Council, which has the power to approve or deny the loan.

Unlike Tools for Change, which can physically go out and solicit in areas in which they are already an established presence, the Revolving Loan Fund was faced with dealing with a population for which the RLF were unknown entities.

Recently, the lending strategy was changed so that clients can now be located all over Homestead, not concentrated in any one area.

Despite the slow start, the loan program is beginning to take off. As of September 15, 1995, 14 loans had been dispersed, and an additional 17 loans are pending, giving a total of 31 projects either funded or submitted for funding. Total dispersed funds amounted to \$1,596,000 out of a total base fund of \$2 million. Requested revenues for the pending 17 projects amount to \$1,269,000.

■ **Leadership**

The original leadership of this project suffered from a lack of experience in revolving loan management and poorly planned communication between the initial target population and the project administration.

Leadership changed hands several times until it was taken over most recently by the Vision Council early in 1994. Since then, there has been an improvement in the loan application process and loaned funds have resulted in some concrete developments. However, there is still a "payback" perception problem with clients. Many of them have gotten used to the idea of grants, since many grants have been awarded in the area by post-disaster agencies. Thus, the concept of a federally sourced loan which must be paid back is

somewhat novel in this funding environment. This problem is being addressed with aggressive leadership in the selection and approval of funding. Now, loans must be approved by a review panel appointed by the city council. Thus, the decision to loan funds is based on a committee process and is not the responsibility of any particular individual.

■ **Summary**

The Homestead Revolving Loan Fund initially suffered from poor leadership stemming from a lack of experience managing such loans and poor

communication with the client population. This delayed the potential benefits of the program, particularly for the poorer neighborhoods initially targeted for assistance. The failure to service these neighborhoods resulted in several changes in project leadership and loan requirements.

The present management of the fund is under the Vision Council, with seventeen loans granted or pending. However, the original client population has been abandoned for established businesses that could pass the scrutiny of a loan approval committee under the auspices of the city council.

Beacon Council Revolving Loan Fund

■ **Project Description**

The EDA grant was supposed to provide low interest construction/first mortgage loans to develop permanent shell buildings for targeted light manufacturing and distribution businesses. The buildings were to be "multi-use industrial facilities" capable of meeting prospective user specifications and a quick turnaround for near-term occupancy requirements. The revolving loan funds were to be used initially to construct three or four 20,000–30,000 square-foot shell facilities in the area south of S.W. 88th Street. The original project brief had also targeted three prospective businesses for the shell buildings; a health technology company, an apparel manufacturer/distributor, and a manufactured housing company. These three companies were expected to create 600 jobs. To date, two Beacon Council loans that have closed have been used for the reconstruction of a restaurant and a school, and have created a total of 139 jobs.

The Beacon Council has received two grants for the Revolving Loan Fund. The first grant was \$2 million and then a second (recapitalization) grant of \$1.5 million was awarded.

■ **Hurricane Impact**

Hurricane Andrew had a devastating effect on the economy of South Dade County. The hurricane destroyed infrastructure, residences, and businesses in the area. Before the hurricane, the area from S.W. 88th Street south to the Monroe County border contained approximately 8,000 businesses employing 123,000 people. Most of these were small businesses, with 60 percent employing less than 5 persons.

■ **Purpose of the Project**

This revolving loan fund (RLF) would help restore businesses damaged by the hurricane and restore the economy of South Dade County through a customized facility development assistance program. Its primary objectives were to (1) create permanent jobs for workers displaced as a result of Hurricane Andrew and by recent layoffs by local employers; (2) retain the existing business base in the hurricane-damaged areas of South Dade which is eroding due in part to a lack of available warehouse space; (3) restore the local, state, and federal tax base which has been diminished as a result of the hurricane; and (4) maintain Greater Miami's position as the leading gateway and transshipment center for international trade with Latin America and the Caribbean.

■ **Results**

The Beacon Council has officially closed two loans and has four others pending. According to the Beacon Council's Manager of Financing Programs, they have committed \$2 million of the total \$3.5 million EDA grant. They are also currently reviewing two applications totaling \$1.25 million.

The Beacon Council advertised the RLF in several newspapers, including the *Miami Herald*, the *Times*, and the *Diario de las Americas*. It also sent loan application packets to over 30 organizations in the Miami area.

The Manager of Financing Programs says of EDA that "there are no other agencies that have taken the time or the interest to ensure full recovery after the devastation our community has been through." She also believes that if the Beacon Council had not received EDA funds for the RLF "the devastated areas of our county would still be in the first stages of recovery." She believes EDA has helped to speed up the recovery process.

The two loans that have closed went to the Berkshire School in Homestead and the Old Cutler Oyster Company, a restaurant located on South Dixie Highway.

The Berkshire School was totally destroyed by Hurricane Andrew. The loan was used to completely rebuild the school which now employs 42 people. Before Hurricane Andrew, 32 people were employed at the school, so 10 new jobs have been created. According to the school's principal, if they had not received the loan from the Beacon Council, the "Berkshire School would not have been able to continue to provide quality education for many children here in the Homestead-South Dade area."

The Old Cutler Oyster Company is a restaurant that was completely destroyed by Hurricane Andrew. The \$250,000 RLF loan was used to supplement a loan from the Small Business Administration. It was used to rebuild the restaurant that now employs 97 people. Before the hurricane, the restaurant employed 63 people, so 34 new jobs were created. According to the president of the restaurant, they would not be open today if they had not received the loan from the Beacon Council since he could not obtain a supplemental loan elsewhere. Overall, he was very pleased with the assistance he received from the Beacon Council. However, he felt that the people he dealt with were initially disorganized and that the loan was very expensive with high closing costs.

The Beacon Council currently has four pending loans. Two of the pending loans will go to Kendall Health Care and to Contender Boats.

Kendall Health Care consists of nursing homes and assisted living facilities. It currently has two sites and plans to expand to a third site. Hurricane Andrew caused \$6 million in damages to the its two existing facilities and repairs took 1½ years. Currently, Kendall Health Care has returned to its

pre-Hurricane Andrew occupancy rates and number of employees. The pending loan was expected to close December 20, 1995. This \$300,000 loan will be used to purchase a three-acre plot for the new site.

The owner estimated that the new site will provide 160 new residences and employ 120 new persons. The owner said the loan he will receive from the Beacon Council will be helpful, but not instrumental, in purchasing the new plot. He felt that if he was unable to get a loan from the Beacon Council, he would have been able to get one from a bank. He felt that the assistance he has received from the Beacon Council has been very good, however, he mentioned several areas that need improvement. He found it hard to get in touch with key people who did not return his calls. He also said that it has been difficult keep the process moving and that these problems have made the process more costly due to increased attorney fees.

The pending loan to Contender Boats has been delayed because of County changes in the zoning and building codes. Contender Boats is expected to create about 350 manufacturing jobs.

■ **EDA Response**

According to the Beacon Council's Manager of Financing Programs, EDA staff have been very helpful and very responsive; "they return phone calls!" When the project first started, Dick Burnham would go through financial reports line by line, if necessary. He also offered advice on each project.

■ **Networking**

The Beacon Council developed a network of organizations in the Greater Miami area. For example, the Beacon Council sent loan application packets to 31 organizations. These organizations then came up with "great ideas" for using the

RLF, according to the Manager of Financing Programs at the Beacon Council. She also believes that because of the EDA grant, the Beacon Council has developed good ties with other organizations.

Beacon Council sent loan application packets to the following organizations:

Arca Development Inc.
BAC Consortium
Bankers Savings Bank
Builders Association of South Florida
Bureau of Business Assistance
Bureau of Industry Development
Bureau of International Trade and Development
Camacol (Latin American Chamber of Commerce)
Dade County Industrial Development Authority (IDA)
Dade County Public Schools, Business Ind. Services Dept.
Dade Manufacturers Council
Department of Business and Economic Development
Florida Department of Commerce
Florida International University Women's Business Resource Center
Greater Miami Chamber of Commerce
Greater South Dade/South Miami Chamber of Commerce
Homestead/Florida City Chamber of Commerce
Homestead Office, Florida Department of Labor

Latin Builders Association
Line, Jacobson, Attorneys at Law
Llanes and Garcia
Miami Dade Community College
National Association of Women Business Owners
Perrine Office, Florida Dept. of Labor
Private Industry Council of South Florida
Service Corp of Retired Executives
Small Business Development Center
The Entrepreneurial Institute at Florida International University
The Women's Chamber of Commerce
U.S. Small Business Administration
U.S. Department of Commerce

■ **Leadership**

The Beacon Council has gone through several changes in leadership from the time of the initial awarding of the EDA grant. These changes slowed the start-up of the project. They have only recently begun to make loans to clients, although receiving an additional \$2.0 million from EDA. The present leadership of the project is fair. It could be improved with more aggressive marketing of the loan funds across the spectrum of communities that make up the Metro Dade area.

■ **Summary**

The Beacon Council revolving loan fund has great business development and job creation potential. However, the progress at this point is less than satisfactory. As loans are made and businesses developed, it is anticipated that this project will have a much greater impact on post-disaster recovery.

METHODOLOGY

The methodology used in carrying out this assessment is multifaceted, and is adapted to deal with the range and variety of projects and impacts of the EDA assistance program. Only one other study has dealt with post-disaster assistance (Kinkaide et al. 1991). The assessment consists of two analytic components:

- an analysis of new institutional developments, such as regional planning and coordination efforts, creation of new social and economic partnerships, and enhanced community participation as identifiably linked to the EDA assistance and recovery process; and
- a case study analysis of selected EDA-funded recovery projects in the impact area.

The *institutional analysis* focuses on the cooperative networks and partnerships that have been created or have grown as a result of the hurricane event. Fundamental institutions that are presently involved in active socioeconomic networks are identified, and their roles in the recovery process documented through key informants. This consists of project site visits and interviews with institutional directors, public-sector decision-makers, and EDA. Interviews are complemented with detailed review of the history and roles in disaster recovery of target institutions. Newspapers, agency reports, reviewed publications, newsletters, and committee reports supplement interviews and provide information to sharpen the dialogue therein. They serve as the focus of documented review and interviews. In the analysis, three primary issues serve as a focus for document review and interviews:

- documentation of the structure and function of institutional networks;
- review of the positive outcomes resulting from actions of these networks; and

- assessment of the sustainable utility and future positive benefits that can be expected from the continued functioning of these networks, particularly in regard to economic recovery, disaster preparedness, and response planning.

The analysis of institutional response is complemented by case studies of the impacts of EDA's post-disaster recovery projects. Case studies are based on detailed interviews with selected individuals who are stakeholders in the projects being evaluated. For example, project managers, community supervisors, EDA representatives, chamber of commerce officials, and members of the target population for whom the project is designed are all potential information sources. The case studies are constructed by combining the responses of various key informants with available public documentation of the project, including planning documents, historical sources on project development, and public commentary on the public activity. A highly descriptive account of the project emerges, organized in a progressive time line from the disaster event through the planning and development stages up to the present time.

The analysis of the institutional response is complemented by a *case study review* of the impact of EDA assistance in post-disaster recovery projects. Some thirty diverse projects in various stages of completion were funded throughout the impact area. The case study method is an effective methodology for carrying out a comprehensive review of the impact of a project without the need for a formalized survey instrument. A case study (Yin 1989:23) is an empirical analysis where:

- a contemporary phenomenon is investigated within its real-life context;
- the boundaries between phenomena and context are not clearly evident; and

- multiple sources of evidence are used.

Project selection was achieved in consultation with EDA and by categorizing the various projects based on project design and services provided. Projects that are already completed and those still in implementation are included in the case studies. This type of analysis predicts the socioeconomic impact of a project based on the expectations and perceptions of relevant stakeholders.

Case study analysis includes visiting the selected project sites. At a site, the evaluators developed a descriptive analysis of the project impacts by personal interview of key informants. Key issues that shaped the interviews include the following:

- the timeliness of the EDA response;
- the communication and advertisement of services to the affected populations;
- the nature and degree of cooperation and collaboration between EDA and other relief agencies;
- the kind of project or level of aid received;
- the populations affected;
- the overall outcomes realized from assistance;
- the appropriateness of the project in relation to the needs created by the disaster;
- the economic impact in immediate area and in relation to economic (regional) effects;
- the social impacts and benefits of the project on the target population;
- the effectiveness of project management in regards to project cost and completion schedule; and
- the identification and characterization of institutional and networks created by the project.

The specific case study design used was intensive, site-focused interviews, with those selected for interview being those most directly impacted by the project. These interviews were open-ended but were structured around the key issues listed above. State, regional, county, and city planners and economists were also interviewed, as were members of local chambers of commerce and employees of EDA.

Each cluster of individuals was grouped with similar individuals at each sample project to derive broad responses for the entire sample area. For example, project managers would represent one population, regional planners another, and local community members another.

Once data for site case studies were gathered, they were cross-analyzed, and common features and outcomes aggregated under the guiding questions above. From a complete analysis of the institutional network study and the collected case studies, overall outcomes and products were highlighted and described. Outcomes and products were summarized as "lessons learned." Under these lessons, an emphasis was placed on the actual impacts of assistance and recommendations for improvement of the design and delivery of EDA disaster assistance programs in the future.

Case studies were complemented by a series of short unstructured interviews of sample populations within the overall impact population of a project area. For example, the commercial water and sewer line installed along the Dixie Highway between the 232 and 264 blocks will impact businesses along this stretch of US-1. Interviews of businesses along the Highway complemented interviews given by key informants responsible for the direction of the project.

In Florida City, interviews of individual shop owners and managers in a newly constructed mall gave an idea of impact from the development of new businesses and economic gains to the city

from infrastructure that would not have been built here if EDA funds were not available to pay for the commercial water and sewer line. A select number of interviews of businesses aided by the Tools for Change training and technical assistance program gauged the effectiveness of the EDA assistance. Finally, interviews of all project

managers gave us an overview of the present status of projects, and the impact of EDA funding and assistance in each of these cases. These population interviews were not meant to replace the case studies, but are instead complementary to them.

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Dyer, Christopher. The Culture of Response: An analysis of the Variability of the Institutional and Cultural Reaction to the Impact of Hurricane Andrew on the Fisheries of Florida Versus Louisiana." Invited paper presented at the 94th Annual Meetings of the American Anthropological Association. 1995. Washington, DC.

Kinkaide, P.S.; Bradley, S.E.; and Kyba, D.A. 1991. *Alberta Public Safety Services: Evaluation of the Disaster Assistance Program*. Emergency Preparedness Canada, Alberta Public Safety Services. Edmonton, Alberta. 122 pp.

Metropolitan Dade County. 1992. *Economic Recovery Strategies Phase One: Short Term Strategies*.

Sun-Sentinel. 1992. Andrew! Savagery from the Sea. Orlando, Florida. September, 1992.

Yin, Robert K. 1989. *Case Study Research: Design and Methods*. Applied Social Science Research Methods Volume 5. Sage Publications. Newbury Park. 166 pp.

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CASE STUDY CONTACTS

MetroZoo

Director
Curator of Mammals
Curator of Birds
Planning/Grants Officer
Zoo Construction/Maintenance Manager
Director of Grants and External Funding, Florida Department of Parks and Recreation

City of Florida City

City Manager
Business Administrator, Florida City Farmers Market
Mall Administrator, Florida City Key Shops Mall
30 Business managers at the Keys Mall, including a wide variety of businesses such as clothing, video, food, gifts, shoes, cosmetics, antiques, office supplies, and others.

City of Homestead

President, Metro Dade Community College, Homestead Campus
Mayor
Director of Community Development
Director, Vision Council
Administrative Specialist, Vision Council
2 Community Development Specialists
Neighborhood Liaison
City Manager
Director, Branch Office of Tools for Change
Director, Haitian Organization of Women
Administrative Specialist, Haitian Organization of Women
10 Business Managers
5 Haitian Clients, "Business Incubator Without Walls" Project

Tools for Change—Overtown

Executive Director
Administrative Specialist
Legal Advisor
Accountant
Loan Specialist
Community Advisor
Block Grant Specialist
10 Clients

City of Hialeah

Mayor
City Manager
Administrative Specialist
Community Development Specialist
3 Members of the City Council
5 Business Managers

Goodwill Industries

President
Business Manager (Miami)
Textile Engineer
Personnel Director
Grants Administrator
Client Programs Officer
Client Supervisor
6 Clients (Focus Group Interview)
Business Manager (Dixie Highway)
Training Specialist

Dixie Highway—Metro Dade Water and Sewer

Grants and Contracts Officer
Administrative Assistant, Grants Office
15 Businesses along the Dixie Highway, including the following:
family restaurant; clothing store; agricultural cooperative; day care center; community bank;
hardware store; Goodwill, lumber store; aluminum shed distributor; bar and grill; family grocery
store; automobile service station; lumber yard; used car dealership; and flea market.

Florida International University

Project Director
Project Administrator
5 Clients in International Trade Business
Administrative Specialist

Miccosukee Reservation

Tribal Planner
Financial Advisor
Cultural Broker

South Florida Regional Planning Council

Executive Director
Administrative Specialist
2 Development Planning Specialists
10 Clients

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Aguirre, Benigno E. and David Bush. *Disaster programs as technology transfers: The case of Puerto Rico in the aftermath of Hurricane Hugo*. Texas A&M University, College of Architecture, Hazard Reduction and Recovery Center, HRRC Article 78A. College Station, TX, 1992.

Aptekar, Lewis. *Environmental Disasters in Global Perspective*. New York: G.K. Hall & Co. 1994.

In the 1990s, more than 90 percent of the victims of thunderstorms, floods, and earthquakes will reside in the developing world, where people are becoming more vulnerable to such hazards because of increased population densities, urbanization, and proliferation hazards. This book examines how humans react to disasters, focusing on the developing world where economic and political factors contribute strongly to changing an extreme meteorological or geological event into a disaster. By illustrating the interconnectedness among social problems, environmental disasters, political concerns, and human behavior, this volume contributes to the understanding of disaster behavior and psychological trauma with respect not only to individuals, but also to societies and cultures.

Association of State Floodplain Managers. *Cross Training: Light the Torch*. University of Colorado, Institute of Behavioral Science, Natural Hazards Research and Applications Information Center, Special Publication no. 29. Boulder, CO, 1993.

This is the proceedings volume from the meeting held March 16–18, 1993 in Atlanta, Georgia. It contains papers that address damages and reconstruction following Hurricane Andrew; the study of FEMA operations conducted by the National Academy of Public Administration; flood hazard mitigation; multiobjective floodplain management, geographic information systems and other digital tools; stormwater management; codes, construction standards, and building performance; project engineering; floodplain management program administration; and erosion.

Bair, Frank, Cynthia Elliott and Bob Ruff. *Hurricane Andrew: Storm of the Century*. Fort Lauderdale, FL: Dade Book Company, 1992.

This book is a pictorial record of the most destructive storm in America's history. Features include sections on damage sustained by museums, mobile home parks, and the Metrozoo; relief efforts by federal, local, and non-governmental sources; and damage inflicted in areas other than the more-publicized "hit zone." The publisher will contribute \$2.50 for each copy sold to the Salvation Army hurricane relief fund.

Berke, Philip and Dennis Wenger. *Montserrat: Emergency Planning, Response, and Recovery Related to Hurricane Hugo*. Texas A&M University, College of Architecture, Hazard Reduction Recovery Center, HRRC Research Report 23R. College Station, TX, 1991.

This report examines the emergency planning, response, and long-term recovery activities by both governmental and nongovernmental organizations in Montserrat, with a view toward gaining knowledge that will lessen the impacts of future hurricanes on Caribbean islands. The report identifies emergency planning and response components that worked well or were problematic and provides a list of 49 recommendations to improve the island's contingency planning. The dimensions of the recovery process are examined in the context of organizational

coordination, monitoring and compliance activities, recognition of rights, leadership, resources, and the linkage of recovery to development issues.

Bradley, Susan. "Disaster assistance pays off." *Emergency Preparedness Digest* 18, no. 4 (October–December 1991): 14–16.

Bradshaw, Arthur L., Jr. *Federal Emergency Management Agency (FEMA) and the Army: Emerging Missions for Emergency Management*. U.S. Dept. of Defense, Army War College. Carlisle Barracks, PA, 1992.

In the past, U.S. military forces, particularly the army, have played an important role in domestic disaster response. After chronicling the evolution of FEMA through 1988, the author focuses on federal disaster response after Hurricane Hugo and the Loma Prieta earthquake—two disasters that severely tested federal response capabilities. The author addresses U.S. Army emergency management responsibilities, Department of Defense guidelines for providing military support to civil authorities, the army organizational structure for domestic emergency assistance, and trends in planning for disaster response and recovery.

Bunker, Robert M. "Military engineers and disaster relief: Hurricane Hugo." *The Military Engineer* 82, no. 534 (March–April 1990): 36–39.

Caldwell, Bruce and Chuck Appleby. "Florida Fiasco." *Informationweek* (April 26, 1993): 12–13.

Caribbean Disaster Emergency Response Agency. *Presentations of the Caribbean Island Session of the 16th Annual National Hurricane Conference: Re-Inventing Hurricane Preparedness 1994*.

Caribbean Disaster Emergency Response Agency (CDERA). Saint Michael, 1994.

The 16th annual National Hurricane Conference was held March 8–11, 1994 in Orlando, Florida, under the theme "Did We Learn Anything from Hurricane Andrew? Experience gained from this devastating disaster could prove valuable to the developing Caribbean nations. Although the Caribbean was not severely affected by Hurricane Andrew, participants from that region felt it was time to determine whether their disaster management arrangements had accommodated lessons learned from Hurricanes Gilbert and Hugo. These papers cover hurricane preparedness in Barbados, cooperative disaster management with nongovernment and community organizations, hurricane impacts on Caribbean buildings, U.S. involvement in regional response, utility preparedness planning, improvement of institutional response to disasters, and preparedness planning by the Caribbean Electric Utility Services Corporation.

Central United States Earthquake Consortium. *Emergency Response and Recovery*. Central United States Earthquake Consortium (CUSEC), Committee on Emergency Response and Recovery, Monograph no. 4. Memphis, TN, 1993.

Part of a series written to increase the technical capacity of professionals dealing with earthquake hazards in the U.S., this volume looks at current practice; the link between response and recovery, including the processes of damage assessment, emergency sheltering, providing public access, demolition and debris removal, and restoring critical facilities; and recovery and reconstruction, including rehabilitation and rebuilding, federal disaster assistance, business recovery, housing and financial recovery. Other topics examined include building hazard

mitigation into the recovery and reconstruction process, restoring critical facilities, planning for an earthquake, coordinating disaster response, gathering relevant disaster information and data, and learning from the response to Hurricane Andrew.

Chite, Ralph M. *Farm Disaster Payments: Recent History and Specialty Crop Issues*. U.S. Congress, Library of Congress, Congressional Research Service, CRS 94-283-ENR, 1994.

This report examines why many specialty crop growers take issue with the U.S. Dept. of Agriculture policy, which considers the expected production of a tree destroyed by disaster to be zero and therefore disqualifies its owner for disaster payments due to that loss. This report contains information on recent emergency funding for agricultural disasters and outlines specialty crop issues and concerns. Other issues addressed include payment limitations, eligibility for nursery crop losses, aquaculture losses, and the release of contingency funds.

Christian, Cora L.E. *Hurricane Hugo's Impact on the Virgin Islands*. University of Colorado, Institute of Behavioral Science, Natural Hazards Research and Applications Information Center, Working Paper no. 73. Boulder, CO, 1992.

Associated with the U.S. Virgin Islands Department of Health, the author offers the results of two large surveys of island residents—one, conducted soon after Hurricane Hugo; the other, a year later. Although other issues were addressed, both assessments focused on aspects of the storm affecting the health of island residents. Beyond evaluating the more immediate impacts of the hurricane, the researchers developed a demographic profile of the population before and after Hugo in order to ascertain possible long-term effects and consequences for the psychological and social environment. The extensive data (offered in both narrative and graphic form) provide many guideposts for the mitigation of future disasters in the Caribbean.

Christie, John, ed. and staff of the Sun-Sentinel. *Andrew! Savagery from the Sea*. Tribune Publishing. Orlando, FL, 1992.

Photos, their captions, and text provide a vivid portrait of the damage and social and economic disruption caused by Hurricane Andrew. All profits from sales of the book will be donated to Andrew victims.

Council of State Governments. "Responding to Emergencies." *State Government News* 33, no. 3 (March 1990): 4-33.

Governments have important roles to play in preparing for and responding to disasters. They can enact legislation and regulations to minimize damage from hazardous human activity, as well as establish effective response programs to help the afflicted when a disaster occurs. This topical issue examines government roles based on the hard lessons of recent disasters. Reaction to Hurricane Hugo and the Loma Prieta earthquake by various levels of government are evaluated, as is the need for governments to prepare for a potentially disastrous earthquake along the New Madrid fault in the central U.S. Other articles address the mental health effects of disasters, disaster profiteering, nuclear civil defense, the role of the Red Cross in responding to disasters, and problems coordinating relief efforts.

Davis, Cindy and Kate Farnsworth. *After-Action Report of the Hurricane Hugo OFDA Disaster Relief Team*. U.S. Dept. of State, Agency for International Development, Office of Foreign Disaster Assistance (OFDA). Washington, D.C. 1990.

Dept. of Veterans Affairs. *Hurricane Andrew After-Action Report*. Dept. of Veterans Affairs, Veterans Health Administration, Emergency Medical Preparedness Office. Washington, D.C. 1993.

When the Department of Veterans Affairs (VA) responded to Hurricane Andrew in August 1992, it was the agency's first disaster involvement under the newly approved Federal Response Plan. The Veterans Health Administration (VHA) began preparations prior to the disaster in anticipation of the impact upon VA medical centers and moved quickly after the storm to assist in the relief effort by deploying mobile health clinics and providing medical and other supplies. This report details the VHA's response and offers several "information papers" on lessons learned and recommendations for improving command, control, coordination, mobile health services, record keeping and fiscal management, communications, logistics planning, response planning and support, readjustment counseling, donations management, and public relations. Sixty-five recommendations are offered.

Disaster Recovery. "The Wrath of Hurricane Andrew." *Disaster Recovery* 5, no. 4 (October–December 1992): 10–23.

Six short articles discuss the impact of Hurricane Andrew on businesses in the Florida area and how some businesses dealt with cleaning up the mess left by Andrew. Other topics addressed include: restoring business operations, dehumidifying damage caused to records and equipment, improving emergency plans, and personal trauma suffered by employees.

Dynes, Russell R. *FEMA: Disaster Relief or Disaster Period*. University of Delaware, Disaster Research Center, Preliminary Paper no. 181. Newark, DE, 1992.

Ferraiolo, Diane. *Lasting storm damage*. *Best's Review (Property/Casualty Edition)* 94, no. 2 (June 1993): 20–26.

Florida Governor's Disaster Planning and Response Review Committee. *Hurricane Andrew—Final Report*. Florida Governor's Disaster Planning and Response Review Committee. Tallahassee, FL, 1993.

This report presents the findings and recommendations of a committee formed to assess Florida's capability to plan for and respond to a hurricane with the potential for inflicting major damage. It provides information on the impacts of the hurricane and discusses the need for improved readiness and a clearer understanding of relationships among all levels of government. It also recommends specific actions for improving communications and public education regarding disasters, evacuation planning and evacuation transportation systems, marinas and bridges, shelter planning and operations, post-disaster communications and public information, response and recovery, damage assessment, medical care and relief, and coordination of volunteers and donations.

Fontaine Company, Inc. *An Analysis of the Damage and Effects of Hurricane Hugo and Status of Recovery One Year Later*. South Carolina Governor's Office, Division of Intergovernmental Relations. Columbia, SC. 1991.

This study analyzes the damage and effects of Hurricane Hugo and the status of the recovery one-year later in the 24 presidentially declared disaster counties of South Carolina. The study was conducted in three basic phases: data collection and coordination; an analysis of damages and recovery and forecasts of the economy with and without the storm; and recommendations made to facilitate economic recovery and development in the general economy, infrastructure, natural resources, housing, environment, and solid waste. The report contains information on local/state economic impacts, along with detailed accounts about how the impacts were addressed by the different disaster assistance organizations.

Garvin, Glenn. "Reaping the whirlwind." *Reason* 24, no. 8 (January 1993): 27-31.

Genega, Stanley G. "When nature strikes back." *The Military Engineer* 84, no. 553 (November-December 1992): 4-6.

Golden, Joseph H., Earl J. Baker, et al. *Hurricane Hugo: Puerto Rico, the Virgin Islands, and Charleston, South Carolina, September 17-22, 1989*. National Academy of Sciences, National Research Council, Natural Disasters Studies Volume 6. Washington, D.C. 1994.

This report is divided into two sections: (1) the impacts of Hurricane Hugo on the U.S. Virgin Islands and Puerto Rico, and (2) its impacts on North and South Carolina. It provides information to facilitate comparison of emergency preparation and response and property damage between the mainland states and the territories, between one-language and two-language cultures, and between aspects of the storm; warnings, evacuations, and emergency response; deaths and damages; and physical impacts. It concludes with recommendations concerning hurricane models, wind speed data, working with local media, building design, emergency power supplies, the ALERT rain gauge network, emergency broadcasts, evacuation efforts and shelters, and coastal zone management.

Guarisco, Tom, Bill Decker and Ralph Monson. *Hurricane Andrew: A Diary of Destruction in South Louisiana, August 26, 1992*. Lubbock, Tex.: C.F. Boone Publishing Inc. 1992.

This photo essay, together with substantial amounts of text taken from local newspapers, provides a vivid account of the damage caused by the storm and describes how many individuals and communities coped with Andrew and its aftermath.

Harrald, J. *Emotion and the American Red Cross's response to Hurricane Hugo and the Loma Prieta earthquake*. Paper presented at the UCLA International Conference on the Impacts of Natural Disasters, July 10-12, 1991. Los Angeles, CA, 1991.

Hebert, Paul J., Jerry D. Jarrell and Max Mayfield. *The Deadliest, Costliest, and Most Intense United States Hurricanes of This Century (And Other Frequently Requested Hurricane Facts)*. U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, National Hurricane Center, NOAA Technical Memorandum NWS NHC 31. Miami, FL, 1993 (revised).

Numerous requests are received at the National Hurricane Center for statistical information on deaths, damages, and severity of hurricanes that have struck the U.S. This publication—a revision of NOAA Technical Memorandum 18 (1983)—updates hurricane damage statistics through 1992, thus including preliminary data for damage caused by Hurricane Andrew. Information presented includes lists of U.S. hurricanes that have caused 25 or more deaths and more than \$100 million in damages in the 20th century; all major hurricanes that have made U.S. landfall; comparisons in hurricane trends from recent seasons and decades previous to the 1980s; and lists of the most meteorologically potent hurricanes from 1900 to 1992.

Horwich, George. *Disaster and Response in an Island Economy: The Case of Montserrat and Hurricane Hugo*. Paper presented at the 15th Annual Conference of the Caribbean Studies Association, Trinidad and Tobago, May 23, 1990. Author at Purdue University, Dept. of Economics. West Lafayette, IN, 1990.

Japan Public Works Research Institute (PWRI). *Wind and Seismic Effects: Proceedings of the 25th Joint Meeting of the U.S.-Japan Cooperative Program in Natural Resources, Panel on Wind and Seismic Effects*. Japan Public Works Research Institute, PWRI Technical Memorandum no. 3217, 1993.

Katherine Duffy & Associates, Inc. *Hurricane Hugo: A Review of the Research*. South Carolina Sea Grant Consortium. Charleston, SC, 1991.

This report reviews literature dealing with recovery from Hurricane Hugo in order to assess the city's prestorm preparedness and poststorm response. Both academic papers and postdisaster assessment reports were examined, resulting in an extensive set of recommendations designed to help planners and hazard managers profit from Charleston's experience.

Kinkaide, P.S., S.E. Bradley and D.A. Kyba. *Alberta Public Safety Services: Evaluation of the Disaster Assistance Program*. Emergency Preparedness Canada, Alberta Public Safety Services. Edmonton, Alberta. 1991.

This report evaluates Alberta's Disaster Assistance Program, and through it, Canada's federal program for assisting provinces affected by major disasters. Specifically, the study assesses the effectiveness of the Alberta program in re-establishing individuals, farms, businesses, and communities impacted by three disasters—floods in 1986 and 1988, and a severe tornado in 1987; determines the impact of the Alberta Program on post-disaster recovery; and provides information to help in the design and delivery of disaster assistance programs in the future. The report defines the Alberta Program and describes its organization, and then presents detailed information on the Program's impact and effectiveness.

LeMoyne, James. "In the storm." *New Yorker* 68, no. 33 (October 5, 1992): 83–88.

Levy, Louis J. and Llewellyn M. Toulmin. *Improving Disaster Planning and Response Efforts: Lessons from Hurricanes Andrew and Iniki*. Booz-Allen & Hamilton, Inc. McLean, VA, 1993.

Following the widespread destruction caused by Hurricanes Andrew and Iniki, disaster planning, response, and recovery procedures in the U.S. have received considerable attention. This report synthesizes two on-site evaluations of relief efforts. Specifically, it focuses on the importance of devoting financial, technological, and human resources to developing effective plans for disaster response and mitigation. Recommendations are divided into four areas: forecasting of hurricane tracks and intensities, evacuation and shelter, disaster response, and political aspects of disaster relief.

Lord, J. Dennis. "Property damage and retail sales impacts of Hurricane Hugo." *Area 23*, no. 3 (1991): 229-237.

This paper examines Hugo's impacts on local economies in terms of property damage and the resulting increase in retail sales within the do-it-yourself (DIY) sector. It presents the geography of property damage for those counties located within the federally designated disaster zone, investigates the storm's impact on DIY retail sales in both South and North Carolina as people began to repair and reconstruct damaged buildings, and lastly, considers some of the lessons learned by various levels of government, the insurance industry, and retailers.

Macchio, William J., ed. *Path of Destruction: Hurricane Andrew, August 1992*. Charleston, South Carolina: Historic Publications, 1992.

In addition to meteorological information about Hurricane Andrew, this illustrated document contains considerable anecdotal information about damage inflicted on the built and natural environments of Florida and Louisiana. Accounts are furnished about relief efforts, television meteorologist Bryan Norcross's efforts to assist Floridians in preparing for and recovering from the storm, and the National Hurricane Center's experiences before, during, and after the storm. Over 300 photographs, together with storm facts and quotations from survivors, help to convey the enormity of Andrew's impact on the shattered communities.

McAuliffe, Michael. "Andrew, prince of storms." *The Military Engineer* 84, no. 553 (November-December 1992): 6-8.

McGoodwin, James R. and Christopher L. Dyer. *Reconnaissance of South Florida to Assess Damages, Planned Responses, and Future Needs in the Commercial Fisheries Stemming From Hurricane Andrew*. University of Colorado, Institute of Behavioral Science, Natural Hazards Research and Applications Information Center, Quick Response Research Report, no. 59. Boulder, CO, 1993.

Mesa, Blanca. "When the winds die down." *Planning* 59, no. 1 (January 1993): 10-14.

The article describes some of the reconstruction proposals that have received funding, reviews the plethora of problems facing planners in both urban and rural areas, and provides some information on Andrew's impact on the economy. The article also states that Andrew hurt the tropical fruit growers hardest.

Miller, H. Crane. *Hurricane Hugo: Learning from South Carolina*. U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service, Office of Ocean and Coastal Resources Management. 1990.

In addition to reporting on the success or failure of hurricane-resistant building design and construction practices, this report discusses the development of building codes in the state and examines how homeowners, flood, and wind insurance acted as a mitigating agent for disaster recovery. The analysis was performed on 3,700 claims on policies written by the South Carolina Windstorm and Hail Underwriting Association. Appendices present damage data for much of the states's coastal zone, the distribution of windstorm insurance claims, and a synopsis of construction code legislation.

Miller, Kristen S. and Catherine Simile. *They Could See Stars from Their Beds: The Plight of the Rural Poor in the Aftermath of Hurricane Hugo*. University of Delaware, Disaster Research Center, Preliminary Paper no. 175. Newark, DE, 1992.

Monday, Jacquelyn L. *Learning from Hurricane Hugo: Implications for Public Policy*. U.S. Federal Emergency Management Agency, Federal Insurance Administration. Washington, D.C. 1992.

Like other natural disasters, Hurricane Hugo spawned a large number of research investigations and resultant reports. This volume attempts to consolidate those findings and conclusions that could have public policy implications (i.e., the conclusions that could provide real guidance to the public officials, at any level, who must plan for or manage the effects of future storms). Findings are listed under the categories of physical characteristics of the storm, impacts on natural systems, impacts on humans and human systems, insurance, coastal development, structural performance, building design and construction, and emergency management.

Monday, Jacquelyn L. *Learning from Hurricane Hugo: Implications for Public Policy—An Annotated Bibliography*. U.S. Federal Emergency Management Agency, Federal Insurance Administration. Washington, D.C. 1992.

A companion document to the publication that lists key findings or lessons learned from the Hurricane Hugo experience, this bibliography cites materials that (1) originated with a person or organization with recognized expertise in, or had official standing in post-Hugo response actions, or (2) includes information from which something could be learned that would have implications for public policy, as opposed to the concerns of the private sector. The bibliography contains approximately 150 annotations.

Moore, Jamie W. and Dorothy P. Moore. *Sullivan's Island, South Carolina—The Hurricane Hugo Experience: The First Nine Months*. University of Colorado, Institute of Behavioral Science, Natural Hazards Research and Applications Information Center, Working Paper no. 81. Boulder, CO, 1993.

Based on the results of a questionnaire mailed to Sullivan Island residents, the authors describe the emotional effects of Hugo and the factors that contributed to heightened stress. Their report focuses on problems that residents experienced with insurance companies, as well as the stress created by government actions such as barring residents from returning immediately to their property after the storm.

Navy Civil Engineer. "Disaster Recovery Issue—Hurricane Hugo and the San Francisco Earthquake: How the Navy Recovered from These Disasters." *Navy Civil Engineer* XXIX (Spring/Summer 1990): 3–26.

This topical issue contains five articles that examine how U.S. Navy personnel restored damaged facilities in Puerto Rico and Charleston (Hurricane Hugo), and in the San Francisco Bay area (Loma Prieta earthquake). While the earthquake caused only moderate damage and disruption to Navy operations, Hugo caused \$190 million worth of damage to Charleston naval installations. Information is presented on the types and extent of damage sustained, lifeline restoration, problems encountered at the Charleston naval hospital, and applying the right tool to the right job. Twenty-two lessons learned are also listed.

Neal, David M. *Hurricane Andrew and federal disaster policy*. University of North Texas, Dept. of Sociology and Social Work, Institute of Emergency Administration and Planning. Denton, TX, 1993.

News and Courier; Evening Post—Charleston, South Carolina. *And Hugo Was His Name: Hurricane Hugo, A Diary of Destruction*. C.F.Boone Publishers. Sun City West, AZ, 1989.

Collated from journalistic sources, this publication contains numerous anecdotal accounts from storm survivors, presents many eye-opening photographs of the destruction wrought by Hugo, and describes the emergency response efforts of agencies and individuals who were involved in recovery operations following the storm's passage. Damage assessments are given by state and by county.

Norris, Fran H. and Gary A. Uhl. "Chronic stress as a mediator of acute stress: the case of Hurricane Hugo." *Journal of Applied Psychology* 23, no. 16 (August 1993): 1263–1284.

Peterson, Grant C. "FEMA and Hugo." *The Military Engineer* 82, no. 534 (March–April 1990): 40–42.

Peterson, Lorna. *Disaster Relief: A Bibliography*. Vance Bibliographies, Public Administration Series no. P-2902. Monticello, IL, 1990.

The bibliography contains 109 citations to books, government documents, Congressional hearings, and articles from popular magazines, newspapers, and scholarly and professional journals. Materials cited deal with the overall concepts behind the provision of domestic and international disaster relief, government enabling legislation, bureaucratic responsibilities, disaster relief planning, and actual relief efforts, such as those following Hurricane Hugo and the Loma Prieta earthquake.

Phillips, Brenda D., Lisa Garza and David M. Neal. "Intergroup relations in disasters: Service delivery barriers after Hurricane Andrew." *Journal of Intergroup Relations* 21, no. 3 (Fall 1994): 18–27.

Piacente, Steve. "In the eye of the storm." *Government Executive* 21, no. 12 (1989): 24–33.

Platt, Rutherford H., et al. *Coastal Erosion: Has Retreat Sounded?* University of Colorado, Institute of Behavioral Science, Natural Hazards Research and Applications Information Center, Program on Environment and Behavior Monograph no. 53. Boulder, CO, 1992.

In this volume, the authors outline the issues surrounding coastal erosion; summarize the federal response to the problem; describe and compare individual state programs for dealing with erosion; examine the rebuilding of Folly Beach, South Carolina, following Hurricane Hugo; recount the experiences of Michigan's Emergency Home Moving Program; and contrast homeowner relocation choices for two island communities. Conclusions involve topics such as setback standards, and numerous recommendations are offered for all levels of government.

Post-Courier. *Hurricane Hugo*. Post-Courier—special reprint. Charleston, S.C. September 22–26, 1989.

With the help of an emergency generator, Charleston's Post-Courier was able to continue publishing until conventional power was restored five days after Hugo trashed much of the city. This special reprint edition brings together the paper's coverage of the storm's impact on Charleston during those five days. Activities reported by the newspaper's staff included looting, the evacuation process, availability of food, ice, and water, rescue operations, downed tree removal, restoration of utilities and services, an appraisal of damage caused by the storm, the response of the police force, and disaster assistance efforts.

Preston, Edmund and Theresa L. Kraus. *In Andrew's Path: A Historical Report on FAA's Response to and Recovery from Hurricane Andrew*. U.S. Dept. of Transportation, Federal Aviation Administration, Office of Public Affairs, History Staff, APA-4, 1993.

This report details the Federal Aviation Administration's response to Hurricane Andrew in the Miami Area. It describes the warning stage and employee preparations; events that occurred during the storm's passing; damage to facilities; personal losses suffered by FAA employees and their impacts on employee performance; activities to restore aviation facilities; the FAA's role in assisting FEMA under the Federal Response Plan; and the distribution of relief supplies via airport supply depots.

Raufaste, Noel J., ed. *Wind and Seismic Effects—Proceedings of the 22nd Joint Meeting*. U.S. Dept. of Commerce, National Institute of Standards and Technology, Center for Building Technology, NIST Special Publication 796. Gaithersburg, MD, 1990.

This publication contains the proceedings of the Joint Meeting, held May 15–18, 1990 at NIST facilities in Gaithersburg, Maryland. It includes the program, list of members, panel resolutions, task committee reports, and 39 technical papers grouped under five categories: wind engineering, storm surge and tsunamis, the Joint Cooperative Research Program (four earthquake-related papers), earthquake engineering, and the Loma Prieta earthquake. Topics addressed in the eight Loma Prieta papers include the performance of dams, the performance of wood-framed structures, the performance of nonstructural elements, and the socioeconomic impacts of lifeline performance.

Remion, Michael. *Assessment of Hurricane Hugo damage on state and private lands in South Carolina*. IN: Third Biennial Conference on Remote Sensing Applications, edited by J.D. Greer, Evans City, Penn.: American Society of Photogrammetry and Remote Sensing. 1990.

- Rubin, Claire B. *Disaster recovery from Hurricane Hugo in South Carolina*. Paper presented at the UCLA International Conference on the Impact of Disasters, July 10–12, 1991. Los Angeles, CA, 1991.
- South Carolina Budget and Control Board. *Economic Impact of Hurricane Hugo*. South Carolina Budget and Control Board, Division of Research and Statistical Services, Office of Economic Research. Columbia, SC, 1991.
- South Carolina Human Services Coordinating Council. *The State Human Services Agency Response to Hurricane Hugo*. South Carolina Human Services Coordinating Council. Columbia, SC, 1990.
- South Carolina Office of the Governor. *Hurricane Hugo: After Action Report—Chronology*. South Carolina Office of the Governor. Columbia, S.C. 1989.
- Sullivan, James D., ed. *Proceedings of the 1993 Simulation Multiconference on the International Emergency Management and Engineering Conference—Tenth Anniversary: Research and Applications*. Society for Computer Simulation. San Diego, CA, 1993.
The conference focused on automated emergency management tools, particularly computer use. The volume contains over 40 papers on such diverse computer applications as database management, decision support systems, geographical information systems (GISs), simulation in training and exercises, simulation of physical and economic disaster impacts, evacuation modeling, hazard modeling, and statistical analysis.
- Thomas, Mike. "To the Rescue." *Orlando Sentinel* (November 1, 1992): 8–11; 14–17.
- Thompson, Martie P., Fran H. Norris, and Betty Hanacek. "Age differences in the psychological consequences of Hurricane Hugo." *Psychology and Aging* 8, no. 4 (1993): 606–616.
- United Nations Disaster Relief Coordinator (UNDRO)...Office of. *Case Report: Caribbean—Hurricane Hugo*. United Nations Disaster Relief Coordinator...Office of, UNDRO Publication no. 89/21. Geneva, Switzerland, 1989.
Also identified as "Support to National and Regional Emergency Systems (Lessons Learnt from Recent Disasters including Hurricane Hugo)," this document was prepared in conjunction with the Pan-Caribbean Disaster Preparedness and Prevention Project. Seventy-six comments are offered dealing with hurricane preparedness measures, regional and telecommunications planning, public awareness and the training of emergency personnel, the response to Hugo, the coordination of both internal and external responses, and implications for PCDPPP activities. The rest of the document contains UNDRO information and situation reports, from which a rough chronology of hurricane impact and disaster assistance events can be ascertained.
- University of California at Los Angeles. *Natural Disasters: Agenda for Future Action*. Proceedings of the UCLA International Conference on the Impact of Natural Disasters, held July 10–12, 1991 at UCLA, ISOP (International Studies and Overseas Programs.) Los Angeles, CA, 1991.

U.S. Dept. of Defense. *Hurricane Hugo: After-Action Report*. U.S. Dept. of Defense, Army Corps of Engineers, Charleston District. Charleston, S.C. 1990.

The events prior to, during, and after Hurricane Hugo are chronicled in this report, which focuses on the storm's impact on South Carolina and the role of the Corps of Engineers in the recovery effort. Included are summaries of disaster operations and interagency coordination and discussions of the emergency situation, assistance provided, response effectiveness, and the operation's strengths and weaknesses. The report contains 24 lessons learned.

U.S. Federal Emergency Management Agency. *FEMA's Disaster Management Program: A Performance Audit After Hurricane Andrew*. U.S. Federal Emergency Management Agency, Office of Inspector General, H-01-93. Washington, D.C. 1993.

This report presents the results of an examination by the Federal Emergency Management Agency (FEMA) Office of Inspector General. The report recommends that FEMA develop plans and seek authority to mobilize resources in extraordinary disasters; create a rapid damage assessment system for immediate activation upon warning of an extraordinary disaster; obtain agreement in advance from the Office of the President on changes in the standard cost sharing formula; seek authorization from the president to revise the Federal Response Plan to require other Federal agencies to act immediately; restructure assignments for providing mass care; establish systems for public information distribution during major disasters; reduce the complexity of the aid program for victims; and create or improve administrative support systems.

U.S. Federal Emergency Management Agency. *Hurricane Hugo: Interagency Hazard Mitigation Team Report*. U.S. Federal Emergency Management Agency, Report no. FEMA-843-DR-SC. Atlanta, GA. October 1989.

This report contains recommendations for improved recovery and hazard mitigation that were proposed by a regional FEMA mitigation team which investigated the stricken area in Hurricane Hugo's aftermath. The report addresses issues that South Carolina should consider in future emergency plan development and offers a general description of the disaster and the response to it, addressing government and regulatory structures, hurricane preparedness, damage, initial reaction, and long-term reconstruction. It recommends improvements in the use of South Carolina's emergency operations centers, in floodplain and coastal zone management procedures, in emergency communications, and in the implementation of a mandatory state-wide building code that provides structural protection from both hurricane-force winds and earthquakes.

U.S. Federal Emergency Management Agency. *Interagency Hazard Mitigation Survey Team Report in Response to: The August 24, 1992 Disaster Declaration for the State of Florida—Hurricane Andrew*. U.S. Federal Emergency Management Agency, FEMA-955-DR-FL. Atlanta, GA, 1992.

This report presents the findings of a post-disaster survey team convened in Miami by FEMA and the Florida Division of Emergency Management. It offers recommendations for improving building codes, standards, and practices; coastal and floodplain management; pre- and post-disaster planning; and infrastructure, particularly transportation and information systems. In addition, it examines maritime impacts, agricultural effects, and environmental issues.

U.S. General Accounting Office. *Disaster Assistance: DOD's Support for Hurricanes Andrew and Iniki and Typhoon Omar*. U.S. General Accounting Office, GAO/NSIAD-93-180. Washington, D.C. 1993.

This report studied the effects that providing humanitarian services following disasters had on military services to determine the roles of the armed forces in providing assistance; the problems that affected their ability to deliver assistance; whether their participation affected the units' readiness and training; whether the military needs to reorient its roles, training, equipment and doctrine for post-disaster operations; and the costs and sources of funding associated with the military's participation in disaster assistance operations. The report suggests the Federal Response Plan address a need for better coordination among all assistance providers and for improved damage assessment and needs determination procedures.

U.S. General Accounting Office. *Disaster Assistance: Federal, State, and Local Responses to Natural Disasters Need Improvement*. U.S. General Accounting Office, GAO/RCED-91-43. Washington, D.C. March 1991.

The GAO, in response to requests from members of Congress, has examined how FEMA and other agencies carried out their responsibilities when responding to the almost simultaneous Hurricane Hugo and Loma Prieta earthquake disasters. Recommendations are offered on federal response capabilities.

U.S. General Accounting Office. *Disaster Assistance: Supplemental Information on Hurricane Hugo in South Carolina*. U.S. General Accounting Office, GAO/RCED-91-150. Washington, D.C. May 1991.

U.S. General Accounting Office. *Disaster Management: Improving the Nation's Response to Catastrophic Disasters*. U.S. General Accounting Office, GAO/RCED-93-186. July 1993.

The federal management of catastrophic disasters was intensely criticized after Hurricane Andrew leveled much of South Florida and Hurricane Iniki devastated the Hawaiian island of Kauai. As a result, Congress requested that the GAO review federal disaster response policy. This report summarizes their analyses, conclusions, recommendations, and suggestions for congressional consideration presented at hearings before five Senate and House committees and subcommittees.

U.S. General Accounting Office. *Disaster Management: Recent Disasters Demonstrate the Need to Improve the Nation's Response Strategy—Statement of J. Dexter Peach*. U.S. General Accounting Office, GAO/T-RCED-93-4. January 27, 1993.

The Comptroller General's Office reviewed FEMA following Hurricane Andrew and evaluated federal, state, local and volunteer response to catastrophes. It concluded that FEMA's response strategy is not adequate where state, local and volunteer agencies cannot provide victims with life-sustaining mass care services such as food, shelter, and medical assistance within the first 12 to 24 hours. Key reasons for failure include the absence of provisions for rapid assessment of a disaster's magnitude and lack of a specific functional responsibility to respond to disasters.

U.S. General Accounting Office. *Small Business: SBA Needs to Improve Administrative Practices for Disaster Operations*. U.S. General Accounting Office, GAO/RCED-92-144. Washington, D.C. 1992.

This report presents the GAO's findings about alleged improper administrative practices during the SBA's response to Hurricane Hugo in Puerto Rico and the Virgin Islands. It was found that SBA complied with rules governing its functions, but improvements could be made in SBA procedures for issuing waivers of the automatic reduction in per diem paid to temporary disaster employees. The SBA was found to be making progress in its efforts to increase the efficiency of its disaster recovery activities, and to rectify deficiencies in documentation and periodic review requirements.

U.S. House of Representatives. *Earthquakes and Earthquake Insurance*. U.S. House of Representatives, Hearing before Committee on Banking, Finance, and Urban Affairs, Subcommittee on Policy Research and Insurance, 101st Cong., 2nd Sess., Serial no. 101-74, February 7, 1990. Washington, D.C. 1990.

After the hearing was called to order, Chairman Ben Erdreich announced that the subcommittee "...will consider certain issues relating to earthquakes, including hazard mitigation, emergency response and preparedness, and earthquake insurance coverage...in response to increased concern over disaster assistance and emergency preparedness capabilities in the wake of Hurricane Hugo...and the Loma Prieta earthquake. The subcommittee is most interested in learning about the risks and liabilities associated with earthquake insurance coverage for residential and commercial structures and the insurance industry's ability to absorb claims resulting from a major earthquake disaster. Our inquiry will also include consideration of hazard mitigation research and applied technology." Testimony was taken from nearly 15 experts and numerous publications on seismic safety are reprinted as appendices.

U.S. House of Representatives. *Federal Emergency Management Agency's Disaster Assistance Program*. U.S. House of Representatives, Hearing Before the Committee on Public Works and Transportation, Subcommittee on Investigations and Oversight, 103rd Congress, 1st Session, March 2, 1993, 103-36. Washington, D.C. 1993.

Representative Robert A. Borski opened the hearing by saying, "Now, at a time of comparative calm, is the time for the Subcommittee...to examine FEMA's responses to the most recent disasters. Our current system of emergency response with states taking the lead and FEMA providing assistance, proved inadequate in dealing with Hurricane Andrew last August, just as it proved inadequate in dealing with Hurricane Hugo and the Loma Prieta earthquake three years ago... The testimony we will hear today demonstrates that FEMA did not learn the lessons of Hurricane Hugo and the Loma Prieta earthquake in responding to Hurricane Andrew. FEMA still has what its Inspector General's office calls a wait-and-see approach to disaster response... In truth, the inadequate response to Hurricane Andrew was not all FEMA's fault... Twenty-seven different agencies are involved in disaster response and 20 different congressional committees are involved. FEMA is so busy coordinating that it is not surprising that it doesn't do an adequate job of responding."

U.S. House of Representatives. *Federal Emergency Management Agency's Response to Natural Disasters*. U.S. House of Representatives, Hearings Before the Subcommittee on Investigations and Oversight of the Committee on Public Works and Transportation, 101st Congress, 2nd Session, May 1-2, 1990, Report no. 101-72. Washington, D.C. 1991.

Slightly more than 6 months after Hurricane Hugo and the Loma Prieta earthquake had left their impacts on the U.S., hearings were held to evaluate the accomplishments of FEMA in its role as provider and manager of the Federal Disaster Assistance Program. Testimony and prepared statements from witnesses and four members of Congress, along with reprinted documents, letters, and articles provide insights to FEMA's response to the two natural disasters.

U.S. Library of Congress, Congressional Research Service. *A Descriptive Analysis of Federal Relief, Insurance, and Loss Reduction Programs for Natural Hazards*. U.S. House of Representatives, A Report Prepared Pursuant to the Request of the Committee on Banking, Finance, and Urban Affairs, Subcommittee on Policy Research and Insurance, 102nd Congress, 2nd Session, October 15, 1992, Committee Print 102-15. Washington, D.C. 1993.

This comprehensive examination of federal disaster relief policies that involve insurance programs contains chapters addressing insurance in natural disaster relief; loss control (disaster assistance, federal flood and erosion control projects, land use management, agricultural programs); National Flood Insurance Program (current program and its evolution, accommodation of coastal erosion, cost of the NFIP, legislation in the 102nd Congress); federal crop insurance and disaster assistance (basic mechanics of crop insurance, other major federal agricultural disaster programs, financial performance of the crop insurance program, barriers to participation, proposed policy options for reforming crop insurance, crop insurance and the 1990 farm bill, crop insurance policy options); proposals for earthquake and all-risk insurance (H.R. 2806-the Earthquake Hazard Reduction Amendments Act, policy issues, affordability of residential earthquake insurance, all-risk insurance); and a summary of insurance and disaster relief assistance.

U.S. Senate. *Federal Disaster Policy and Future of Federal Emergency Management Agency*. U.S. Senate, Hearing before a Subcommittee of the Committee on Appropriations, 103rd Congress, 1st Session, Special Hearing, S. Hrg. 103-207, January 27, 1993. Washington, D.C. 1993.
In her opening statement, Senator Mikulski said that [the subcommittee] "will be conducting a hearing on the federal disaster policy, the future of FEMA, and, of course, what this would mean to the appropriations framework...Most recently no story gripped the American people more last year than Hurricane Andrew...Unfortunately, the federal government's initial response run through FEMA was widely seen by many of Hurricane Andrew's victims in Florida as a disaster itself...I believe our current disaster relief policy must be changed to make the federal government approach disasters on the basis of risk."

U.S. Senate. *Lessons Learned from Hurricane Andrew*. U.S. Senate, Hearing before the Committee on Environment and Public Works, Subcommittee on Toxic Substances, Research and Development, 103rd Congress, 1st Session, April 19, 1993, S. Hrg. 103-86. Washington, D.C. 1993.

Opening remarks of Senator Bob Graham includes: "The hearing...first will be a presentation and discussion on the issues that preceded the arrival of Hurricane Andrew—the preparation for the event; the second section will be on the events immediately following Hurricane Andrew; the

third on the recovery effort, which of course, is still ongoing; and then, finally...we will hear citizen comments on any of those or other topics.”

U.S. Senate. *Rebuilding FEMA: Preparing for the Next Disaster*. U.S. Senate, Hearing Before the Committee on Governmental Affairs, 103rd Congress, 1st Session, May 18, 1993, S. Hrg. 103-527. Washington, D.C. 1994.

Chairman John Glenn opened the hearing by saying “In order to get a sense of perspective for this hearing, I asked my staff to review the Committee’s work, which goes clear back to 1978, on President Carter’s reorganization plan which created FEMA. The goal was to consolidate disparate agency programs under one central roof and to provide strong leadership focus and attention for emergency management activities. It has been 15 years. The level of coordination that we had anticipated at that time, I think it would be fair to say, has certainly not happened as of yet. In fact, we hear the cries from the very people FEMA was set up to serve, those Americans who are victims of natural catastrophes and who have bitterly complained that FEMA’s follow-up on many occasions was an even bigger disaster.”

Welebny, Ronald J. “After Andrew I need a map that shows...” *Photogrammetric Engineering & Remote Sensing* 59, no. 1 (January 1993): 45–47; 50–51; 54–56.

This article describes a sophisticated GIS system developed by employees of Digital Matrix Services (DMS) to assist in postdisaster relief activities following Hurricane Andrew. Besides technical information about setting up and running the GIS, the author recapitulates the problems (and solutions to the problems) that emerged during the relief process.