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**THE EFFECT OF HURRICANE ANDREW ON
MONROE COUNTY BUSINESSES: NEGATIVE ECONOMIC
EFFECTS AND ASSISTANCE SOUGHT**

by **LOAN COPY ONLY**

Chuck Adams

SP95-2

March 1995

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FOOD AND RESOURCE ECONOMICS DEPARTMENT

Institute of Food and Agricultural Sciences

University of Florida

Gainesville, Florida 32611

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Final Report (Volume 1) of a component study funded by the Economic Adjustment Assistance Development Grant for Monroe County (U.F. Acct. No. 7306186-13).

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MONROE COUNTY BUSINESSES: NEGATIVE ECONOMIC
EFFECTS AND ASSISTANCE SOUGHT**

Abstract

A survey was conducted to establish the nature of economic damages sustained by Monroe County businesses as a result of Hurricane Andrew. A mailout questionnaire was sent to 1000 businesses throughout Monroe County. The sample was stratified by business type and location within the county. The specific objectives of the survey were to determine the types of economic damages sustained, how long the damages persisted, and what types of assistance programs were demanded following the storm event.

KEYWORDS: Monroe County, Hurricane Andrew, economic damages, business.

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Executive Summary

A mailout survey was conducted to assess the economic damages Monroe County businesses suffered as a result of Hurricane Andrew. The survey was intended to identify the types of negative impacts experienced, the duration following the hurricane these effects persisted, the recovery assistance needed following the storm, recovery assistance programs sought and their usefulness, and lost sales by market sector. A questionnaire was mailed out to 1000 Monroe County businesses. The survey sample was stratified by type of business and Keys subregion. A total of 292 usable questionnaires were returned.

The most problematic issues following the storm event were utilities and communication disruption, reduction in numbers of customers, and inventory management. The negative effects that persisted the longest were reductions in numbers of customers, inventory acquisition, availability of new labor, and overhead associated with the recovery process. Problems associated with structural damage, communication and utilities disruption, security, transportation, and availability of staple supplies were resolved the quickest.

Approximately 40 percent of the respondents indicated that no assistance was needed immediately following the hurricane. However, the remaining respondents indicated that assistance was needed for debris removal, redevelopment of lost markets, and loans for lost revenue, capital, and inventory. The majority of respondents indicated that no storm-related needs continued to exist at the time of the survey.

Most respondents were aware of the availability of recovery assistance programs, particularly for the Upper and Middle Keys subregions. However, almost one-half of the respondents in the Lower Keys indicated that they were unaware of the assistance programs had they been needed. Also, most respondents did not seek assistance from the available programs. Those that did contacted the Small Business Administration (SBA), FEMA, and Florida Department of Labor (FLDOL). Less than 10 respondents contacted any one of the relief programs in any of the Keys subregions surveyed. For those respondents who contacted a relief program, most programs received relatively low ratings in terms of usefulness during the recovery period. SBA and FLDOL received the highest ratings.

Respondents were asked about sales losses due to the hurricane relative to three market sectors - residents/local businesses, tourists, and out-of-county businesses. The tourist market was effected the most by Hurricane Andrew, in terms of lost sales. The out-of-county market was least effected. The tourist market experienced the largest percentage reduction in sales. In addition, the tourist market took longer to recover of the three sectors analyzed.

**HURRICANE ANDREW AND MONROE COUNTY BUSINESSES:
NEGATIVE ECONOMIC EFFECTS AND RELIEF SOUGHT**

Introduction

Hurricane Andrew struck south Florida on 24 August 1992. The brunt of the physical damage occurred in the southern and central areas of Dade County as the storm made its way across the tip of the peninsula. Some physical damage also occurred in the northern Monroe County region (north of Key Largo). Beyond physical damage from high winds, waves, and wind-blown objects, other forms of "economic" damage was reportedly incurred by local businesses due to the storm. Utility and communication services were disrupted. Transportation links were temporarily severed. Sources of labor were reduced as employees sought long-term protection and relocated within or from the Monroe County region. Tourists reportedly avoided the region under the perceptions of wide ranging physical destruction and lack of recreational facilities throughout the Keys. Although these forms of "damage" are hard to quantify in a monetary sense, their occurrence left an indelible economic footprint on many local businesses in the Keys.

The purpose of this study was to assess the negative economic effects of Hurricane Andrew on individual businesses in Monroe County, Florida. A survey of Monroe County businesses was conducted to determine what kind of economic damages occurred, how pervasive these negative effects were during the period following the storm, how long the effects remained, and what volume of lost sales resulted. In addition, the types of assistance programs

sought, and the degree to which these assistance programs were deemed useful, was also of interest.

The study was funded by the Florida Department of Economic Assistance as a part of a parent project administered by the Monroe County Cooperative Extension program. The goal of the parent project is to develop a County-wide recovery strategy in the event of a future storm such as Hurricane Andrew. Other studies focused on issues such as evacuation plans, inventories of natural resource damage, dislocated worker assessments, and tourism market losses. In total, these studies would provide information and directives necessary for the development of an effective storm recovery plan for residences and businesses in Monroe County.

As stressed earlier, this study focused on the negative economic effects as a result of the storm. Some "near miss" areas may actually have experienced inadvertent financial benefits from the hurricane, as relief workers took advantage of available housing and provided a surge of business activity during the cleanup stage following Hurricane Andrew. However, these positive aspects of the aftermath were not addressed. Only those factors from which businesses must recover were of interest to the study.

Other studies examined the effects on businesses resulting from Hurricane Andrew. These studies, however, were confined to assessing business impacts in the Dade County region, which was in fact hardest hit by the storm (Hull and Hodges, 1993; Southern California Edison Company, 1993; Homestead/Florida City Chamber of Commerce, 1993; Behavioral Science Research, 1993). No study has

comprehensively examined the negative impacts of Hurricane Andrew on Monroe County businesses. Thus, this study represents the only source of information concerning these storm-induced effects for businesses in the Keys region of Florida.

Objectives of Study

The overall objective of the study was to determine the nature and extent of economic damages experienced by Monroe County businesses as a result of Hurricane Andrew. This was to be achieved by soliciting information from a representative sample of Monroe County businesses via a mailout questionnaire concerning:

- (a) the type of negative effects experienced,
- (b) the duration following the storm event these effects persisted,
- (c) the recovery assistance needed immediately following the storm event,
- (d) recovery assistance programs sought and their usefulness,
- (e) lost sales by market segment resulting from the storm, and
- (f) descriptive information regarding business type, size, and location within the Keys region.

Survey Design and Methodology

The following section discusses the survey design chosen and the methodology employed to assess the negative impacts on Monroe County businesses as a result of Hurricane Andrew.

10KW

Zip Codes - 33040-33045

Middle Keys: Geographic/Municipal - Moser Channel north to Long Key

Taxing Districts - 500M (2), 500D (3), 500L (4a), 50KC, 50LA

Zip Codes - 33050-33052, 33001

Upper Keys: Geographic/Municipal - Craig Key north to Monroe/Dade County boundary

Taxing Districts - 500I (4b), 500P, 500V (5), 500V (VENTSHR), 500K, 500W (6), 500R (7), 500S, 500O, 500C, 500W, 500F

Zip Codes - 33036, 33037, 33070

"Taxing Districts" refers to the Monroe County Florida Taxing District designations currently recognized by Monroe County which encompass the corresponding geographic region. The Zip Code ranges were obtained from the U.S. Postal Service and represent the Zip Codes which apply as nearly as possible to the corresponding municipalities found within the respective geographic designations. The latter definition of subregions by Zip Code was the most useful in terms of associating survey responses with a given subregion. Figure 1 provides a graphical representation of the three subregions of Monroe County utilized for this study.

Business Population Utilized

A comprehensive list of commercial businesses in Monroe County from which to draw a sample proved to be somewhat problematic.

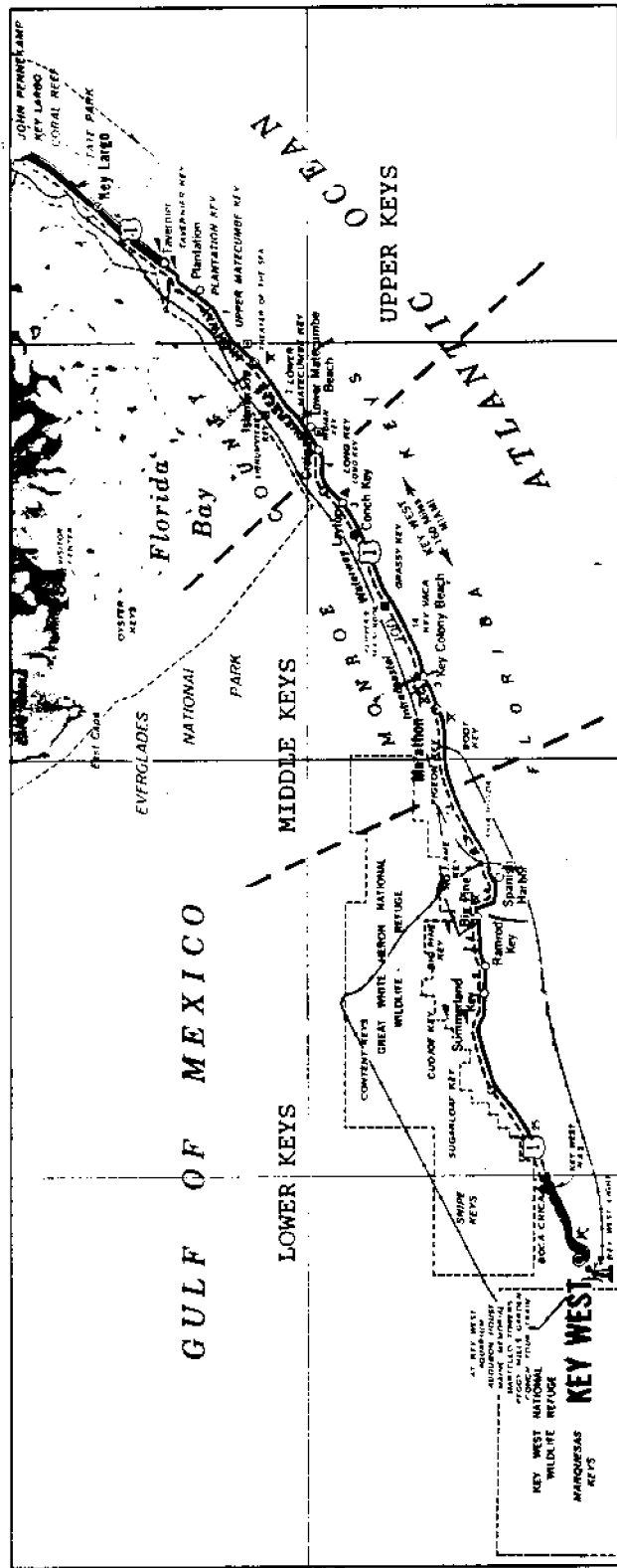


Figure 1. Monroe County and the Subregions Utilized

Several possible sources of such a list were contacted.

The Florida Department of Revenue (Division of Information Systems and Services, Bureau of Registrations and Records, Permanent Files Section) was consulted as a possible source of a comprehensive listing of business entities in Monroe County. Individual businesses are contained within a database which lists all registered commercial entities statewide by Federal Identification Number and State Sales Tax Number. However, a cross listing by county had apparently never been requested and it was suggested that such a listing would not have been feasible in the near future. The Florida Department of Commerce (FDOC) and the Florida Chamber of Commerce (per FDOC recommendation) were contacted. The Chamber of Commerce does maintain a list of businesses (Directory of Florida Industries) for each county by Standard Industrial Classification Code, but the list is not comprehensive nor current. For example, the list only contains 9,000 entries statewide, which is less than the total number of individual businesses in Monroe County alone. The rapid entry and exit of small businesses at the county level is difficult to capture and not reflected in the statewide database.

Several sources of a list of Monroe County businesses were consulted at the county level. Local Chambers of Commerce and Property Appraisers offices were contacted. In turn, these consultations lead to two major business listings found at the County Courthouse in Key West: the Occupational License File and the Personal Property File.

The Occupational License File - This file is a card catalogue containing approximately 13,000 records, each representing a separate license filed with Monroe County. Each record contains the business name and address, account number, descriptive code, and type of business, as well other information. One disadvantage of utilizing this file as the population from which to draw a sample is that a single firm may possess more than one license (i.e., a motel/restaurant/bar) and duplicative listings may exist. Another disadvantage is that the file is not computer databased, complicating any efforts to draw a random sample. The file also does not contain certain types of businesses, such as insurance agents, banks, and commercial fishermen.

Personal Property File - This computer databased file contains approximately 11,000 records. Each record contains the business name and address, type of business (property tax code), taxable value of property, and other information. Advantages of using this file include (1) the file contains few, if any, double listing since each firm must designate a single applicable property tax code for the business, (2) the file is computer databased and regularly updated, and (3) any commercial business in Monroe County with taxable property will be in the file. One disadvantage is that very small businesses with no taxable property will not be in the file (i.e. many commercial fishermen). This file also contains literally thousands of individual housing rental properties (single family dwellings, duplexes, apartments, etc.), many of which have a common owner. The difficulties inherent in selecting a random,

representative sample of these properties precluded including these properties in the total population. Therefore, the effective adjusted total population of businesses in the PPF after removing rental properties was approximately 6300.

Given the above characteristics of each file, the Personal Property File (PPF) was deemed to be most representative of the total population of businesses in Monroe County - with the exception of commercial fishermen. Only about 50 commercial fishermen appeared in the PPF listing. Official records of the Florida Department of Environmental Protection (FDEP) indicate almost 3000 commercial fishermen exist in Monroe County. To obtain a sample of commercial fishermen in the County, a listing of Saltwater Product License (SPL) holders in Monroe County was obtained from the FDEP, Florida Marine Research Institute, Fisheries Statistics Section. Even though this file likely contains a number of inactive SPLs, this was the most representative listing of the population of commercial fishermen available for the county. This file contains approximately 2700 records.

Sample Structure

A sample of 1000 businesses was drawn from the two business populations discussed above: Monroe County Personal Property File and the Saltwater Products License listing. Of this sample of 1000 businesses, 750 were randomly selected from the PPF listing and 250 were randomly selected from the SPL listing. This distribution approximately mirrors the relative percentage each list accounts

for in the adjusted total population of businesses for the county (approximately 9000; PPF - 6300, SPLs - 2700). The two subsamples were drawn from each population list by using a random number coding technique.

Each subsample was stratified by region. This was an attempt to account for the regional differences in numbers of businesses, as well as any regional differences in the economic effects associated with the storm event. Table 1 provides the regional stratification utilized for both subsamples.

Table 1: Regional Stratification for the PPF* and SPL* Subsamples, by Subregion		
Subregion	PPF	SPL
Upper Keys	285	46
Middle Keys	135	72
Lower Keys	330	132
Total Sample Size	750	250
* PPF - Personal Property File SPL - Saltwater Products License File		

In addition, the subsample taken from the PPF listing was further stratified by type of business. This was imposed to account for changes in the distribution of business types across regions. Table 2 provides the stratification by business type utilized for the PPF subsample.

Questionnaire Development

A mailout questionnaire was utilized to solicit the information necessary to address the objectives of the study. The primary information to be collected with the questionnaire was; (1) the types of negative impacts experienced by the business as

Table 2: Business Type Stratification for the PPF Subsample, by Subregion				
Business Type	Region			Total
	Lower Keys	Middle Keys	Upper Keys	
Retail	82	33	70	185
Wholesale	9	4	8	21
Leasing/Rental ^{**}	39	16	33	88
Services	143	59	125	327
Specialty	57	23	49	129
Total	330	135	285	750

* See Appendix A for a list of specific businesses types contained within each of these major categories.

** Excluding residential housing rentals.

a result of the storm event,

(2) the length of time these negative impacts persisted after the storm event,

(3) the types of recovery assistance needed immediately following the storm event,

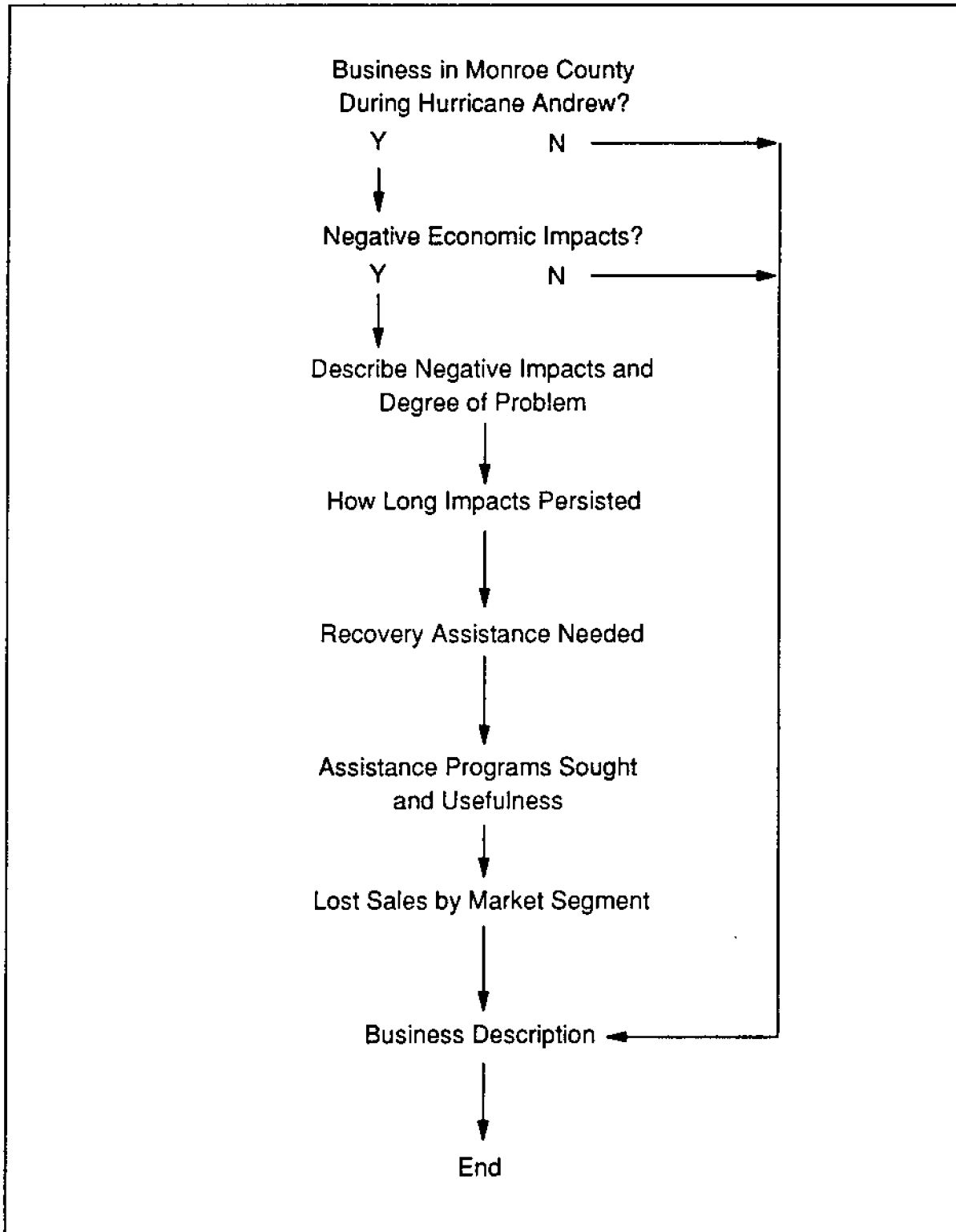
(4) the assistance programs the business owners availed themselves to, and the perceived usefulness of these programs,

(5) the lost sales by market sector resulting from the storm event, and the length of time required for these markets to recover, and

(6) descriptive information regarding the type of business, firm size, and location within the county.

A flow chart representing the logical sequence of general questions found in the questionnaire is found in Figure 2. Note the possibility exists (due to an unavoidable lag in updating) for some firms to be on the current PPF or SPL list, but were either no longer in business when Hurricane Andrew made landfall or initiated

Figure 2. Monroe County Business Questionnaire Flow Chart



business operations immediately after the storm. For these firms, the questionnaire only solicits descriptive information.

The questionnaire was pretested by interviewing 10 firms in the Middle and Upper Keys regions during 6-7 January 94. These firms represented a diverse range of business types, including furniture sales, recreational diving, charter fishing, commercial fishing, seafood production, lodging, real estate sales, and lumber/hardware retailing. The questionnaire was also reviewed by representatives of the Monroe County Cooperative Extension Service staff and representatives of the League of Women Voters. The comments generated during the pretest/review process resulted in a much improved final version of the questionnaire (Appendix B.1).

The survey instrument was mailed out in two waves utilizing a modified version of the widely recognized Dillman survey process. The first wave was mailed out 9 February 94. The materials included in the envelope included a copy of the questionnaire, a cover letter explaining the purpose of the survey (Appendix B.2), and a business reply envelope. The second wave was mailed out 2 March 94. The materials included a second copy of the questionnaire, a reminder cover letter reiterating the importance of the survey and the requested response (Appendix B.3), and a business reply envelope. Given that the name of the firm was not requested on the survey form for confidentiality purposes, it was not possible to purge the list utilized for the second mailing of first wave respondents. Therefore, the second wave was mailed to all 1000 businesses.

Data Analysis

The data generated by the responses were entered into a LOTUS (version 2.01) data set. This data set was then converted into a SAS (version 6.02) data set. The data were then analyzed utilizing a series of SAS procedures. However, simple frequency analyses were the most useful in assessing the nature of the questionnaire responses.

Description of Survey Sample

Of the 1000 questionnaires sent out in each of two waves, 318 questionnaires were returned. Of those returned, 26 were unusable due to being incomplete. This left a total of 292 usable questionnaires, for an effective response rate of approximately 30 percent. There were a number of undeliverable questionnaires, due to expired or erroneous addresses contained in the PPF and SPL files. The exact number of undeliverable addresses reconciled against each mailing list was not computed. This information would be available from the author upon request. No attempt was made to account for nonresponse bias.

Returns by Subregion

The return rates were fairly consistent across subregions in the County (Table 3). The Lower Keys region generated the lowest effective return rate of 26 percent. The highest return rate was produced by the Upper Keys region, which was expected given the closer proximity to where the storm made landfall and the greater

Table 3: Sample Size and Return Rate, by Subregion			
<u>Subregion</u>	<u>Subsample Size</u>	<u>Usable Returns</u>	<u>Effective Return Rate</u>
Upper Keys	331	94	28.3%
Middle Keys	207	56	27.0
Lower Keys	462	121	26.2
Total County	1000*	292*	29.2

*These values do not represent the sum of the subregions values due to 21 returned questionnaires indicating business Zip Codes outside Monroe County. The total effective return rate would be 27.1 percent excluding these returns.

likelihood of actual and perceived damage as a result of the storm. As a result, business owners located in the upper Keys may have a greater interest in the development of a storm event recovery plan.

Description of Survey Respondents

The majority of firms responding to the survey indicated that the business was located in Monroe County prior to and during the storm event. In addition, most firms indicated that the hurricane did have a negative impact on the business. Of all respondents, approximately 90 percent indicated that the business was located in Monroe County prior to and during the storm (Table 4). The remaining 10 percent either started business after the storm, or had ceased business prior to the storm and had not yet been purged from the PPF list. This distribution was relatively constant across regions.

Table 4: Description of Survey Respondents: Location and Impact, by Subregion

A. Q: Was Business located in Monroe County prior to and during Hurricane Andrew?							
Upper Keys		Middle Keys		Lower Keys		Total	
Yes	No	Yes	No	Yes	No	Yes	No
93%	7%	93%	7%	88%	12%	89%	11%
B. Q: Did Hurricane Andrew have a "negative" impact on your business?							
Upper Keys		Middle Keys		Lower Keys		Total	
Yes	No	Yes	No	Yes	No	Yes	No
75%	25%	75%	25%	62%	38%	68%	32%
* Includes <u>only</u> those respondents that provided answers for question indicated.							

Also, most firms indicated that Hurricane Andrew resulted in a negative impact on their business. Across the entire county, 68 percent of the survey respondents indicated that their business experienced negative impacts due to the storm. For the Upper and Middle Keys subregions, three-fourths of the respondents indicated negative impacts due to the storm. However, only 62 percent of the respondents from the Lower Keys subregion indicated their business experienced any negative impacts due to the Hurricane Andrew.

The survey encountered a range of business types. Although a diverse complement (24 choices) of business types were provided, most of the respondents indicated their businesses were involved in personal/business services, retail trade, or other unspecified activities (Table 5). These three accounted for over 40 percent of the total number of responding businesses. Of the remaining 21 business types, commercial fishing represented 15 percent of the total number of respondents, with eating/drinking establishments,

leasing/rental, wholesale trade, construction, guide/charter service, and landscaping representing about equal shares. Table 5 also provides the distribution of business type by subregion. Note that the upper Keys region accounted for the smallest portion of the commercial fishermen. Responses to "other" are given in Appendix C.1.

The characteristics of the sample respondents in terms of business size (i.e. number of employees and annual gross sales) is also provided in Table 5. Note that the majority of businesses responding to the survey had less than five employees and had gross annual earnings of less than \$100,000. The distribution of business sizes was approximately constant across subregions.

**Findings of the Survey Questionnaire:
Business Impacts, Lost Sales, and Assistance Needed**

This section describes the primary findings of the survey questionnaire regarding the various impacts experienced by businesses in Monroe County as a result of Hurricane Andrew. The following discussion will focus on the nature of the negative business impacts experienced, their duration, assistance needed, assistance sought, usefulness of available assistance, monetary losses by market sector, and recovery period for these market sectors impacted by the storm event. Salient differences by subregion will also be highlighted. The actual frequency distributions of responses are presented in Appendix D. For questions where applicable, responses to "other" are given in Appendix C.

Table 5. Description of Survey Respondents: Business Type and Size By Subregion

A. Type of Business	Upper	Middle	Lower	Total*	
	(no.)	(no.)	(no.)	(no.)	(%)
Amusement/Recreation	3	0	0	3	1
Eating/Drinking Est.	3	1	6	10	3
Government Related	0	0	1	1	—
Health Service	1	2	1	4	1
Leasing/Rental	4	0	2	10	3
Motel/Hotel	1	0	2	4	1
Private Assoc./Club	0	0	0	0	0
Transportation	0	0	0	0	0
Commercial Fishing	5	15	21	43	15
Dock, Basin, Marina	0	0	0	0	0
Grocery	0	1	0	1	—
Insurance/Real Estate	1	0	0	1	—
Legal Service	0	0	1	1	—
Non-medical Profess.	2	2	1	5	2
Repair	4	1	0	6	2
Wholesale Trade	5	2	4	13	4
Construction	3	5	3	11	4
Education	1	0	0	3	1
Guide/Charter Service	1	1	6	8	3
Landscaping	5	1	7	15	5
Manufacturing	0	0	1	1	—
Personal/Bus. Services	13	1	14	29	10
Retail Trade	18	9	24	53	18
Other (see Appendix C.1)	24	15	26	68	23
B. Annual full and part-time employment					
1 - 5 persons	73	46	84	211	75
6 - 15	15	7	23	48	17
16 - 50	4	0	4	10	4
51 - 100	0	1	3	4	1
101 - 200	0	1	0	5	2
over 200	0	0	2	2	1
C. Annual gross sales					
under \$50,000	38	15	40	98	38
\$50,000 - \$99,000	12	14	21	48	19
\$100,000 - \$299,999	17	12	19	50	19
\$300,000 - \$499,999	7	2	9	19	7
\$500,000 - \$999,999	8	5	7	21	8
\$1,000,000 - \$4,999,999	2	1	9	13	5
\$5,000,000 - \$9,999,999	0	0	2	4	2
over \$10,000,000	1	1	1	5	2
* Total may not add up to sum of subregion values due to some respondents providing Zip Codes which were outside of Monroe County.					

Negative Impacts Experienced

Respondents were asked to rate the degree to which a number of likely issues were problematic following the storm event. The rating was accomplished using a Likert scale which ranged from "1" to "5", where "1" represents no problem and "5" represents a major problem. These scores were averaged across all respondents for each subregion and for the county. Note that the relative magnitude of the mean scores are very similar across all subregions. For example, the most problematic issues following the storm include utilities disruption, communication disruption, reduction in numbers of customers, and inability to acquire and maintain inventories (Table 6). With few exceptions, the mean scores were typically higher for the Upper Keys subregion. As would be expected, utility disruption was less of a problem in the Lower Keys region, while lack of security, structural damage, and communication disruptions were a greater problem in the Upper Keys. Interestingly, customer loss and transportation problems were more pronounced in the Lower Keys.

Duration of Negative Impacts

For each of those impacts identified, respondents were further asked to indicate what length of time the negative impact persisted. Again, a Likert scale was utilized to solicit the information. The scale ranged from "1" to "5", where "1" represented a duration of one month or less, "4" represented a duration of seven to 12 months, and "5" indicated that the impact still persisted at the time of the survey. The mean Likert scores

Table 6: Negative Impacts Businesses Experienced, by Subregion					
	No Problem				Major Problem
	Likert Score → 1	2	3	4	5
	Mean Likert Score*				
Negative Impact	Upper Keys	Middle Keys	Lower Keys	Total	
Structural damage	1.5	1.3	1.1	1.3	
Inventory damage/loss	1.6	1.7	1.4	1.6	
Inventory acquisition	2.4	2.9	2.5	2.6	
Utilities disruption	4.0	4.0	2.9	3.6	
Communication disruption	3.8	3.5	3.3	3.5	
Employee resignations	1.9	2.0	1.4	1.7	
Overhead	1.8	1.9	1.4	1.7	
Reduction in customers	3.1	3.5	3.7	3.4	
Inability to hire new labor	1.9	1.9	1.4	1.7	
Transportation links cut	1.8	1.8	1.9	1.9	
Staple supplies unavailable	2.2	2.1	1.8	2.0	
Lack of security	1.9	1.6	1.3	1.6	
Other**	2.7	2.1	2.4	2.4	

* The mean score represents the average score on a scale of "1" to "5", with "1" being no problem and "5" being a Major problem.
 ** For a listing of "other" problems, see Appendix C.2.

are given for each impact, by region and county in Table 7.

Those problematic issues with the longest durations included reduction in numbers of customers, inventory acquisition, hiring new labor, and overhead associated with recovery. The duration of the negative impacts experienced due to Hurricane Andrew was typically greater in the Upper Keys. A notable exception would be loss of customers, which persisted an almost equal length of time after the storm event across subregions. Problems associated with inventory acquisition persisted longer for the Middle Keys than for the other subregions. The quickest recoveries were associated with problems such as structural damage, communication and utilities disruption, security, transportation, and availability of supplies.

Table 7: Persistence of Problematic Issues Following Hurricane Andrew, by Subregion					
	Months Following the Hurricane				
	1 or less	2-3	4-6	7-12	Still Persists
Likert Score ---->	1	2	3	4	5
Mean Likert Score*					
Negative Impact	Upper Keys	Middle Keys	Lower Keys	Total	
Structural damage	1.3	1.1	1.0	1.2	
Inventory damage/loss	1.4	1.5	1.2	1.4	
Inventory acquisition	1.6	1.9	1.5	1.6	
Utilities disruption	1.3	1.3	1.1	1.2	
Communication disruption	1.1	1.2	1.1	1.1	
Employee resignations	1.7	1.4	1.1	1.4	
Overhead	1.7	1.5	1.2	1.5	
Reduction in customers	2.4	2.5	2.4	2.4	
Inability to hire new labor	1.8	1.6	1.4	1.6	
Transportation links hindered	1.1	1.2	1.1	1.2	
Staple supplies unavailable	1.2	1.2	1.2	1.2	
Lack of security	1.2	1.1	1.0	1.2	
Other**	2.1	1.9	1.5	1.8	

* This mean score represents the average score given on a scale of "1" to "5", with "1" through "5" being defined as given above.
** For a listing of "other" problems, see Appendix C.3.

Assistance Required by Impacted Businesses

Business that indicated some negative impact due to Hurricane Andrew were queried about the kinds of assistance required immediately following the storm event. Although over 40 percent of the respondents indicated that no assistance was needed, many respondents indicated that debris removal, redevelopment of lost markets, and loans for lost revenue, capital and inventory were needed (Table 8). These needs differed somewhat across subregions. For example, debris removal, redevelopment of lost markets, loans, and insurance claims assistance were the most needed forms of

Table 8: Business Assistance Required Immediately Following Hurricane Andrew, by Subregion				
	Upper Keys	Middle Keys	Lower Keys	Total*
	————— number of respondents —————			
Debris removal	17	2	2	23
Market redevelopment	12	5	15	24
Business loans	12	14	10	38
Legal counseling	3	2	0	5
Code/regulation compliance	4	1	2	7
Insurance claims	10	2	1	14
Employee training/counseling	4	2	1	7
Financial/planning	8	7	1	17
Other**	9	2	3	15
No assistance needed	27	23	27	79
* Totals may not equal sum of subregions due to a number of responding businesses indicating Zip Codes outside of Monroe County.				
** For a list of "other" assistance needs, see Appendix C.4.				

assistance in the Upper Keys subregion. Redevelopment of lost markets was not only the assistance most needed in the Lower Keys, but was also more frequently indicated than in the other two subregions. The same was true concerning loans for the Middle Keys relative to the other two subregions. Business financial/planning assistance was also indicated as a need in the Middle and Upper Keys subregions.

Respondents were also asked about business recovery needs that continued to exist at the time of survey. The majority of respondents indicated that no continuing assistance was needed (Table 9). However, financial assistance, lost market redevelopment, business loans, and employee training were indicated as continuing to be a need as a lingering result of Hurricane Andrew.

Table 9: Business Assistance Currently Needed as a Result of Hurricane Andrew, by Subregion				
	Upper Keys	Middle Keys	Lower Keys	Total*
	----- number of respondents -----			
Debris removal	0	0	1	1
Market redevelopment	7	2	4	14
Business loans	6	7	5	18
Legal counseling	1	1	0	2
Code/regulation compliance	0	1	0	1
Insurance claims	1	1	1	3
Employee training/counseling	1	2	0	3
Financial/planning	5	3	0	8
Other**	1	4	3	8
No assistance needed	44	26	37	112

* Totals may not equal sum of subregions due to a number of responding businesses indicating Zip Codes outside of Monroe County.
** For a list of "other" assistance needs, see Appendix C.5.

Awareness of Available Disaster Assistance Programs

Respondents were asked about their awareness of the available state and federal disaster assistance programs that existed following the hurricane. For the Upper and Middle Keys, 60 and 75 percent of the respondents, respectively, indicated they were aware of such assistance programs being available to businesses damaged by the storm (Table 10). However, over 50 percent of the respondents in the Lower Keys indicated they were unaware of any such assistance programs. Of those respondents who were aware of federal and state assistance programs, most elected not to utilize the services offered.

Table 10: Awareness of Availability of Business Assistance Programs Following Hurricane Andrew, by Subregion

Q: Were you aware of any federal, state, or local business-related assistance programs available to your business following the hurricane?					
<u>Upper Keys</u>		<u>Middle Keys</u>		<u>Lower Keys</u>	
<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
60 %	40 %	75 %	25 %	47 %	53 %
Q: If so, did you seek assistance from any of these programs?					
<u>Upper Keys</u>		<u>Middle Keys</u>		<u>Lower Keys</u>	
<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
21 %	79 %	30 %	70 %	47 %	53 %

Assistance Programs Contacted and Perceived Usefulness

Few survey respondents contacted any of the available relief programs. Although the majority of the respondents were aware of the existence of such relief programs, few were either not in need or unwilling to invest the effort to obtain the various services offered. Respondents in the Upper and Middle Keys regions more frequently contacted the various relief programs. Across regions, however, the percentage of respondents that contacted relief programs was ten percent or less. The most frequently contacted assistance programs were the Small Business Administration (SBA), FEMA, and Florida Department of Labor (FDL). However, less than 10 respondents contacted any one of the relief programs in any of the Keys subregions (Table 11). Interestingly, at least one respondent contacted each of the various programs in the Lower Keys.

With the exception of SBA and FDL assistance programs, most

were judged by respondents to be not very "helpful" (Table 11). The mean Likert score for SBA and FDL were 2.9 and 3.0, respectively, where "1" is "not helpful" and "5" is "extremely helpful". The mean score of 2.9 for SBA indicates that just about the same number of respondents judged SBA, for example, to be "not helpful" as did those who judged the program as being "extremely helpful". Other than these two programs, respondents (on average) scored the other programs no higher than 2.0. FEMA scored a 1.7 mean rating.

Table 11. Assistance Programs Sought by Subregion and Perceived Usefulness by Respondents				
Q: From which of the following programs did you seek assistance? Indicate the degree to which the sources of assistance were helpful.				
<u>Assistance Program</u>	<u>Upper Keys*</u>	<u>Middle Keys*</u>	<u>Lower Keys*</u>	<u>Mean Likert Score**</u>
Home and Personal Property Disaster Loans (SBA)	7	6	4	2.9
Disaster Housing Assistance Program (FEMA)	7	4	3	1.7
Emergency Assistance (Red Cross)	0	0	1	1.0
Bridge Loan Program (Fl. Dept. of Commerce)	0	1	1	1.0
Disaster Unemployment Assistance (Fl. Dept. of Labor)	1	3	2	3.0
Tax Assistance/Business Management Programs	0	0	1	1.0
Insurance Information	1	0	1	1.0
Legal Services	1	1	1	2.0
Social Security Assistance	0	0	1	1.0
Other (see Appendix C.6)				

* Values represent numbers of respondents contacting the corresponding assistance program or agency.
 ** Values represent the mean score of a Likert scale of 1 to 5, where "1" represents "not helpful" and "5" represents "extremely helpful".

Lost Sales and the Market Sectors Impacted

Hurricane Andrew had a significant impact on the sales of businesses located throughout Monroe County. However, the magnitude of these sales losses varies by Keys subregion and market sector. The following discussion focuses on the findings related

to estimated lost sales for three market sectors by subregion. The estimates represent sales losses averaged across only those respondents who provided an actual value (including zero) in their response. Missing values were excluded. The three market sectors include:

residents/local businesses - Monroe County residents and businesses physically located within the county

tourists - non-residents of Monroe County

out-of-county businesses - businesses physically located outside of Monroe County

Reductions in expenditures by each of these market sectors can have differential impacts on the Monroe County economy. For example, expenditures by tourists and sales to out-of-county businesses results in "new" dollars entering the Monroe County economy. These expenditures and sales result in true economic impact (i.e., sales, jobs, and incomes) as these dollars are circulated within the local economy. Expenditures by residents, in general, results in a redistribution of existing dollars. As such, the economic impact is less. The survey attempted to identify (1) which market sector was effected the most (in terms of lost revenue) by the storm event, (2) the relative importance (percentage change) of these sales reductions to local businesses, and (3) the length of time required for these markets to recover.

Sales Losses by Market Sector - Sales losses attributable to the Hurricane Andrew varied by market sector and subregion (Table 12). In terms of market sectors, average sales losses for the

Table 12. Average Sales Losses* by Market Sector, by Subregion			
Q: Estimate for each of the three groups of customers the reduction in total gross sales (in dollars) your business experienced as a result of the hurricane.			
	<u>Residents/Local Businesses</u>	<u>Tourists</u>	<u>Out-of-County Businesses</u>
Upper Keys	\$37,947	\$16,403	\$9,693
Middle Keys	\$23,496	\$23,430	\$19,715
Lower Keys	\$7,606	\$41,185	\$7,432
Total County	\$26,355	\$29,616	\$10,719
* The values represent reported lost sales averaged across the number of respondents providing an estimate (observations with missing values excluded) for each subregion and the county.			

County were approximately equal for the tourist and resident/local markets (\$29,600 and \$26,400, respectively). Sales loss associated with out-of-county businesses was substantially less (\$10,700) than the other market sectors. Sales losses to residents/local businesses were highest in the Upper Keys subregion, with sales losses averaging \$37,900 in the Upper Keys, \$23,500 in the Middle Keys, but only \$7,600 in the Lower Keys. These sales reductions would likely be associated with the initial physical damage and logistical disruptions occurring immediately after the storm event. Therefore, the magnitude of sales losses across subregions appears reasonable given where the storm made landfall. In contrast, sales losses to tourists were highest in the Lower Keys subregion, with sales losses averaging \$41,200 in the Lower Keys, \$23,400 in the Middle Keys, and \$16,400 in the Upper Keys. A common observation during questionnaire pretest and discussions with other industry representatives during the survey design phase of the study was that tourists perceived there to be more extensive damage to

tourist/recreational facilities throughout Monroe County than actually existed. Anecdotal observations suggested that tourism occurrences declined considerable as a result. Thus, given the concentration of the tourist industry in the Lower Keys subregion, this finding was expected. Finally, sales losses to out-of-county businesses was highest in the Middle Keys subregion, with sales losses averaging \$19,700 in the Middle Keys, \$9,700 in the Upper Keys, and \$7,400 in the Lower Keys. This finding was somewhat unexpected. If out-of-county business can be characterized as wholesale activity (note: this was not specified in the questionnaire), the relatively large out-of-county sales losses for the Middle Keys subregion may be associated with wholesale businesses. However, the Middle Keys has the lowest concentration of wholesale establishments among the three subregions (according to the PPF data), although several large wholesale seafood establishments exist in Marathon. In addition, fewer respondents in the Middle Keys indicated they were wholesale establishments than for the other two subregions (Table 5).

Percentage Reduction in Sales - The percentage reduction in sales was somewhat consistent by market sector. However, the largest percentage reductions were experienced by the tourist sector, followed by residents/local businesses. The out-of-county sector was impacted the least. Tourist sales for all respondents were reduced by an average of 34 percent due to the hurricane (as compared to the same period during a typical year) (Table 13). The percentage reduction associated with resident/local business

Table 13. Average Percentage Reduction in Sales* By Market Sector, by Subregion.

Q: Estimate for each customer group what percentage the indicated reduction in sales represents of that expected for the same period during a typical year.

	<u>Residents/Local Businesses</u>	<u>Tourists</u>	<u>Out-of-County Businesses</u>
	----- % -----		
Upper Keys	30	32	29
Middle Keys	40	47	31
Lower Keys	18	31	14
Total County	29	34	24

* The values represent reported percentage reductions averaged across the number of respondents providing an estimate (observations with missing values excluded) for each subregion and the county.

and out-of-county businesses was 29 and 24 percent, respectively. In terms of subregions, the Middle Keys had the greatest percentage reductions in sales across all market sectors. Sales to tourists and residents/local businesses were reduced by 47 and 40 percent, respectively. These estimated percentage reductions exceeded those found for either the Upper Keys or Lower Keys - the latter of which was impacted the least.

Market Sector Recovery Period - The average period of time required for a respondent's lost sales to recovery to what would have been expected for the same span of time during a typical year was requested. The findings indicate that of the three market sectors indentified, the out-of-county market was the fastest to recover, while the tourist market was slowest in recovering (Table 14). For all respondents county-wide, the out-of-county market required 4.3 months to recover. The tourist and resident/local business markets required 5.9 and 4.9 months, respectively. The

Middle Keys markets took somewhat longer to recover. For this subregion, the resident/local business required 6.9 months to recover, while the tourist market required 7.1 months to recover on average. In contrast, the resident/local business market required 2.6 months to recover in the Lower Keys, while the tourist and out-of-county markets required 5.6 and 2.5 months, respectively. Some respondents indicated that a market, at least at the time of the survey, had not yet recovered. For example, five respondents in the Upper Keys indicated that the tourist market had not yet recovered. Seven respondents from the Lower Keys indicated the various market sectors still had not fully recovered from the effects of Hurricane Andrew.

Table 14. Average Period of Time* Required for Market Sector to Recover from Effects of Hurricane Andrew, by Subregion			
Q: Indicate how many months were required for the sales to each customer group to recover to a level that would have been expected for the same period during a typical year.			
	Residents/Local Businesses	Tourists	Out-of-County Businesses
	months		
Upper Keys	4.5 (NR - 4) ^{**}	6.0 (NR - 5) ^{**}	5.7 (NR - 1) ^{**}
Middle Keys	6.9 (NR - 2) ^{**}	7.1 (NR - 3) ^{**}	5.3 (NR - 0) ^{**}
Lower Keys	2.6 (NR - 2) ^{**}	5.6 (NR - 3) ^{**}	2.5 (NR - 2) ^{**}
Total County	4.9	5.9	4.3

* The values represent reported percentage reductions averaged across the number of respondents providing an estimate (observations with missing values excluded) for each subregion and the county.

**Values refer to the number of respondents indicating that the respective market sector had not yet recovered (NR). Those respondents were not included in the computation of the averages.

Summary - The tourist market was hardest by Hurricane Andrew, in terms of the magnitude of lost sales. The out-of-county business market sector was least effected. The reductions in sales to the tourist market also represented the largest percentage reduction for the three market sectors identified. And, the tourist market took longer to recover from the effects of Hurricane Andrew. The resident/local business market experienced greater lost sales the closer the respondent was to the proximity of the hurricane's landfall site. The tourist market was characterized with the opposite relationship. The Middle Keys experienced a larger percentage reduction in sales across all market sectors and endured a longer recovery period than the other subregions.

Conclusions and Recommendations

In a geographic sense, Hurricane Andrew only "brushed" the northernmost region of the Florida Keys. However, the effects of the storm on businesses were felt from Key Largo to Key West. And these effects persisted for some time following the hurricane. The majority of businesses responding to this survey indicated they experienced some form of negative economic impact due to Hurricane Andrew. Some of these effects were of minor importance financially, while others represented substantial economic loss for the business. Some of the effects persisted for a short period of time, while others persisted for many months...a few even persisting to some degree at the time of the survey (over a year following the hurricane).

In general, disruption of utilities and communication, reduced number of customers, and inventory and supply problems were most troublesome. Problems associated with reduced customers, inventory, replacing displaced employees, and overhead associated with the recovery efforts of businesses persisted the longest.

The most pressing needs immediately following the storm included business loans, lost market development, and financial planning assistance. Although most respondents were aware of the existence of relief programs, 40 percent of the respondents did not. Most did not seek assistance, for whatever reason. Of those that did seek some form of assistance, most contacted SBA, FEMA, and FL Dept. of Labor. However, these program were given fairly low marks in terms of perceived "usefulness".

Markets for residents/local businesses, tourists, and out-of-county businesses were all impacted by Hurricane Andrew. However, tourist markets were hardest hit by the storm and also exhibited the longest recovery period.

Recommendations

The distribution and relative magnitude of the negative effects experienced by businesses as a result of any future hurricane in Monroe County will obviously be dictated by the landfall location. A storm that strikes the Lower or Middle subregion of the Keys may give rise to a different complement of assistance needs and demands for relief services by businesses. The findings of this study, however, suggest Monroe County may learn from the recent "brush" with Hurricane Andrew and anticipate,

in general, certain types of impacts and assistance needs concerning businesses throughout Monroe County. For example,

- The effects of a storm making landfall anywhere in the Keys will be felt in some way throughout the entire region.
- Anticipate the needs regarding the loss of utility, communication and transportation services. Poll various industries and businesses in the County regarding the potential specific needs regarding the disruption of these services.
- The number of business owners apparently unaware of the existence of relief programs is troubling. The County should initiate, and repeat every year just prior to hurricane season, a awareness program regarding the various assistance and relief programs available for businesses in the area.
- Coordinate with SBA and FEMA to provide specific assistance in market redevelopment, financial assistance, labor sources (short and long term needs), capital and operating loan sources, and insurance claim assistance.
- Recognize the need to accurately communicate the extent of damage, or lack thereof, that has occurred. The tourist market is vital to the Keys economy. The "brush" of Hurricane Andrew had a significant effect. However, some respondents suggested that a more accurate assessment and communication of these damages may have reduced market losses and the recovery period, particularly in terms of reduced numbers of tourists.

A business relief task force should be established that could coordinate assistance programs and efforts following a storm event and address the issues (and many others) addressed above. This task force should learn from the business needs that occurred in south Dade County following Hurricane Andrew and be prepared to meet similar needs in Monroe County. Pre-disaster contacts should be established with local, state, and federal agencies. Communication procedures should be outlined and a business community "hotline" developed that could function via phone, radio, etc. The Beacon Council recommended a similar pre-disaster task force for Dade County (Southern California Edison Company, 1993). Planners for Monroe County should consult closely with this concept and determine how it may be adapted for Monroe County. The geography of the Keys may necessitate involvement of communities organizations throughout the Keys such that the function and effectiveness of such a task force would not be particularly vulnerable to a storm making landfall at any location along the Keys.

This study has attempted to identify the assistance needs that existed in Monroe County following Hurricane Andrew. The needs identified, lack of familiarity with assistance programs by some members of the business community, market vulnerability, and persistence of economic damages associated with Hurricane Andrew should help community planners better conceptualize and establish directives for a county-wide storm recovery program.

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Southern California Edison Company, 1993. "A Study in Business Restoration Processes Following a Disaster". Report prepared for The Beacon Council. Rosemead, CA. 18 pp.

Appendices

Appendix A - Business Types Contained within General Categories

Appendix B - Survey Mailout Materials:

- B.1 - Questionnaire
- B.2 - First Wave Cover Letter
- B.3 - Second Wave Cover Letter

Appendix C - Responses to "other" for Respective Questions

- C.1 - Question 10
- C.2 - Question 3
- C.3 - Question 4
- C.4 - Question 5
- C.5 - Question 6
- C.6 - Question 8

Appendix D - Frequency Distributions of Responses by Subregion

- D.1 - Definition of Variables
- D.2 - Total County
- D.3 - Upper Keys
- D.4 - Middle Keys
- D.5 - Lower Keys
- D.6 - Unknown (Zip Codes outside Monroe County)

Appendix A

RETAIL

GENERAL MERCHANDISE

- 1100 DEPARTMENT STORE
- 1102 DISCOUNT MERCHANDISE STORE (K MART)
- 1104 USED MERCHANDISE ANTIQUES, PAWN SHOPS
- 1106 ARMY NAVY SURPLUS
- 1108 MAIL ORDER
- 1110 STAMP REDEMPTION
- 1112 MISC. GENERAL MERCHANDISE

APPAREL & ACCESSORIES

- 1130 CLOTHING
- 1132 SHOES
- 1134 MISC. APPAREL & ACCESSORIES, JEWELRY, WATCHES, HATS, SUNGLASSES, PURSES

FURNITURE, FIXTURES, HOME FURNISHINGS

- 1140 HOUSEHOLD FURNITURE
- 1142 OFFICE FURNITURE
- 1144 FLOOR COVERING, UPHOLSTERY, CARPETING
- 1146 APPLIANCES, DINNER WARE, TABLE WARE
- 1148 RADIO, TELEVISION, MUSIC VIDEO, AUDIO VIDEO
- 1150 PARTITIONS, SHELVING, OFFICE & STORE FIXTURES

OTHER MERCHANDISE

- 1160 ELECTRONICS
- 1164 OFFICE SUPPLY, STATIONARY, CARDS
- 1166 BOOKS, MAGAZINES, NEWS STANDS
- 1168 FLORIST, BASKETS, ETC
- 1170 TOBACCO, CIGARS, CIGARETTES
- 1172 FABRIC, LINENS
- 1174 NEEDLEWORK, KNITTING
- 1176 SPORTING GOODS, GUN SHOPS, FISHING SUPPLIES, BAIT & TACKLE, DIVE GEAR
DIVE SHOP
- 1178 ARTS, CRAFTS, HOBBIES, CERAMICS, PETS, POTTERY, STAINED GLASS, FRAMES,
- 1180 PHOTOGRAPHIC SUPPLIES, CAMERAS, FILM, FILM PROCESSING, MOVIE POSTERS, PHOTOS
- 1182 GIFT & NOVELTY SHOP
- 1184 TOYS, DOLLS
- 1186 MISC OTHER MERCHANDISE

HEALTH CARE COSMETICS

- 1190 DRUG STORE / PHARMACY
- 1192 HEARING AIDS, OPTICAL GOODS, ORTHOPEDIC APPLIANCES
- 1194 MEDICAL & DENTAL SUPPLIES AND EQUIPMENT
- 1196 COSMETICS, BEAUTY AND BARBER EQUIPMENT & SUPPLIES
- 1198 MISC

FOOD PRODUCTS

- 1208 SUPERMARKET
- 1210 GROCERY
- 1212 SPECIALTY MARKET, STREET VENDORS, GOURMET FOOD, CANDY, COOKIES, ETC
- 1214 CONVENIENCE STORE
- 1216 BAKERY, DOUGHNUT
- 1218 PACKAGE STORE, LIQUOR & BEER
- 1220 LOUNGE, NIGHT CLUB, BAR
- 1224 CAFETERIA, RESTAURANT, JUICE BAR, COFFEE SHOP
- 1226 FAST FOOD RESTAURANT, ETC.
- 1228 MISC FOOD STORES

BUILDING MATERIALS, HARDWARE, GARDEN SUPPLY

- 1230 LUMBER AND OTHER BUILDING MATERIALS
- 1232 PLUMBING, HEATING, A/C, WATER CONDITIONING, REFRIGERATOR SERVICE & A/C SERVICE
- 1234 ELECTRICAL, LIGHTING
- 1236 PAINT, GLASS, TILE
- 1238 HARDWARE
- 1240 NURSERY, LANDSCAPING, GARDEN SUPPLIES
- 1244 POOL & PATIO UTILITY BUILDINGS
- 1246 MISC BUILDING MATERIALS

MACHINERY/ EQUIPMENT

- 1334 INDUSTRIAL MACHINERY AND EQUIPMENT
- 1336 CONSTRUCTION MACHINERY AND MINING MACHINERY & EQUIPMENT
- 1338 MISC MACHINERY & EQUIPMENT

ELECTRICAL/ ELECTRONIC MACHINERY & EQUIPMENT

- 1340 OFFICE/BUSINESS MACHINERY & EQUIPMENT
- 1342 DATA PROCESSING-COMPUTERS
- 1344 COPYING MACHINES
- 1346 MISC ELECTRONIC & ELECTRICAL MACHINERY & EQUIPMENT

TRANSPORTATION

- 1350 AUTOMOBILES
- 1352 AUTO PARTS, JUNK YARDS, TIRES
- 1354 MOBILE HOMES
- 1356 SHIPS, BOATS
- 1362 MOTORCYCLES, BICYCLES, MOPED RENTALS, PARTS
- 1364 MISC TRANSPORTATION EQUIPMENT, MOTOR HOMES, RV'S, BUS, TAXI

MISC RETAIL

- 1999 MISC RETAIL, SHELLS, SHELL CRAFTS, BEACH SUPPLIES, AQUARIUMS,

WHOLESALE

APPAREL & ACCESSORIES

- 2134 MISC APPAREL & ACCESSORIES, JEWELRY, HANDBAGS, WATCHES

WHOLESALE CON'T

FURNITURE, FIXTURES, HOME FURNISHINGS

- 2140 HOUSEHOLD FURNITURE
- 2142 OFFICE FURNITURE
- 2144 FLOOR COVERING, DRAPERIES, UPHOLSTERY
- 2146 APPLIANCES
- 2148 RADIO, TV, MUSIC
- 2150 PARTITIONS, SHELVING, OFFICE AND STORE FIXTURES

OTHER MERCHANDISE

- 2164 OFFICE SUPPLY AND STATIONARY
- 2168 FLORIST
- 2186 MISC OTHER MERCHANDISE

HEALTHCARE/COSMETICS

- 2190 DRUGS/PHARMACEUTICALS
- 2196 COSMETICS, BARBER AND BEAUTY EQUIPMENT & SUPPLIES

FOOD PRODUCTS

- 2210 GROCERY
- 2212 SPECIALTY (MEAT POULTRY, FISH & SEAFOOD, PRODUCE)
- 2218 LIQUOR, BEER
- 2222 BEVERAGES
- 2228 MISC FOOD

BUILDING MATERIALS AND SUPPLIES, HARDWARE, GARDEN SUPPLY

- 2230 LUMBER AND OTHER BUILDING MATERIALS
- 2236 PAINT, GLASS, TILE
- 2238 HARDWARE
- 2240 LANDSCAPING, GARDEN AND NURSERY
- 2242 FARM, SEED, FERTILIZER, GARDEN FEED
- 2244 POOL AND PATIO-UTILITY BUILDINGS
- 2246 MISC BUILDING MATERIALS

MACHINERY

- 2338 MISC MACHINERY AND EQUIPMENT

ELECTRICAL & ELECTRONIC MACHINERY AND EQUIPMENT/SUPPLIES

- 2340 OFFICE/BUSINESS MACHINES & EQUIPMENT
- 2342 DATA PROCESSING COMPUTERS
- 2344 COPYING MACHINES
- 2346 MISC MACHINERY, EQUIP, AND SUPPLIES

TRANSPORTATION

- 2350 AUTOMOBILES, TRUCKS
- 2352 AUTO PARTS, JUNK YARDS, TIRES
- 2354 MOBILE HOMES
- 2356 SHIPS, BOATS
- 2358 MARINE PRODUCTS
- 2362 MOTORCYCLES, BICYCLES AND PARTS
- 2364 MISC TRANSPORTATION EQUIPMENT, MOTOR HOMES, RV'S, BUS', TAXI

OTHER WHOLESALE

- 2370 CHEMICALS
- 2374 PETROLIUM AND PERTOLIUM PRODUCTS, GASOLINE, OIL
- 2376 MISC OTHER WHOLESALE

APPAREL

- 3130 CLOTHING

FURNITURE & FIXTURES

- 3140 HOUSEHOLD FURNITURE
- 3142 OFFICE FURNITURE

HELATH CARE

- 3196 COSMETICS

FOOD PRODUCTS

- 3202 MEAT & DAIRY
- 3204 CANNED & PRESERVED FRUITS & VEGETABLES, JUICE
- 3216 BAKERY
- 3218 LIQUOR & BEER
- 3222 BEVERAGES

STONE, CLAY, GLASS AND CONCRETE PRODUCTS

- 3272 CEMENT, CONCRETE, GYPSUM, LIME, CORAL
- 3276 MISC PRODUCTS-PORCELAIN (PLUMBING AND ELECTRICAL SUPPLY)

ELECTRICAL AND ELECTRONIC

- 3340 OFFICE/BUSINESS MACHINERY AND EQUIPMENT
- 3342 DATA PROCESSING COMPUTERS
- 3344 COPY MACHINES
- 3146 APPLIANCES
- 3148 COMMUNICATION EQUIPMENT/RADIOS, TV, MUSIC, ELECTRONIC COMPONENTS
- 3346 MISC ELECTRIC MACHINERY, EQUIPMENT AND SUPPLIES

TRANSPORATIONS

- 3356 SHIPS, BOATS
- 3358 MARINE SUPPLIES, BOAT TOPS, COVERS, RODS

OTHER MANUFACTURING

- 3170 TOBACCO, CIGARS, CIGARETTES
- 3999 MISC MANUFACTURING

LEASING/ RENTAL

GENERAL MERCHANDISE

4112 GENERAL MERCHANDISE RENT ALL

APPAREL AND ACCESSORIES

4134 MISC APPAREL AND ACCESSORIES

FURNITURE AND FIXTURES, HOME FURNISHINGS

4142 OFFICE FURNITURE

4146 APPLIANCES

4148 RADIO, TV, MUSIC, VIDEO RENTALS

4150 PARTITIONS, SHELVING, OFFICE AND STORE FIXTURES,

OTHER MERCHANDISE

4160 ELECTRONICS

4180 CAMERAS, MICROFILM, PHOTO EQUIPMENT

HEALTH CARE

4192 HEARING/OPTICAL/ORTHOPEDIC

4194 MEDICAL/DENTAL

4198 MISC HEALTH CARE

BUILDING MATERIALS

4232 HEATING, A/C, WATER CONDITIONING

4244 POOL AND PATIO UTILITY BUILDINGS

4246 MISC BUILDING MATERIAL

MACHINERY AND EQUIPMENT

4332 FARM, GROVE, AND GARDEN MACHINERY & EQUIPMENT

4336 CONSTRUCTION AND MINING EQUIPMENT & MACHINERY

ELECTRICAL AND ELECTRONIC MACHINERY AND EQUIPMENT

4340 OFFICE/BUSINESS MACHINERY & EQUIPMENT

4342 DATA PROCESSING, COMPUTERS, SATELLITE DISH

4344 COPYING MACHINES

TRANSPORTATION

4350 AUTOS & TRUCKS

4354 MOBILE HOMES

4356 SHIPS, BOATS

4360 AIRCRAFT

4362 MOTORCYCLES, BICYCLES, GOLF CARTS

4364 MISC TRANSPORTATION EQUIPMENT

OTHER LEASING/RENTAL

4400 LAUNDRY AND DRY CLEANING EQUIPMENT

4194 MEDICAL AND DENTAL EQUIPMENT

4196 BEAUTY AND BARBER SHOP EQUIPMENT

LEASING/RENTAL CON'T

- 4418 COMMUNICATIONS EQUIPMENT-TELEPHONE ANSWERING
- 4556 SANITARY SERVICES - PORTABLE TOILETS

MISC LEASING/RENTAL

- 4999 MISC LEASING/RENTAL VENDING MACHINES, RESTAURANT EQUIPMENT, HOTEL FF&E BEACH RENTAL.

SERVICES

PERSONAL SERVICES

- 5400 LAUNDRY, SEAMSTRESS, CLEANING GARMENTS
- 5402 BEAUTY AND BARBER SHOPS, DOG GROOMING
- 5404 FUNERAL SERVICE, CREMATORIUM, CEMETARY
- 5406 MISC PERSONAL SERVICE, SHOE SHINE, INTERIOR DECORATING, HANDYMAN, CATERING MOBILE VENDORS, ASTROLOGY, PALM READER

BUSINESS SERVICES

- 5410 ADVERTISING, PUBLISHER, SIGNS, NEWS PAPER, PROMOTIONAL SERVICES, REAL ESTATE MAGAZINE,
- 5412 CREDIT BUREAU, COLLECTION AGENCIES
- 5414 SECRETARIAL SERVICES, MAILING, COMMERCIAL ART, PHOTOCOPYING, PHOTOGRAPHY
- 5416 CLEANING AND MAINTENANCE, PEST CONTROL, POOL CLEANING, CARPET CLEANING
- 5418 MISC BUSINESS SERVICES, PERSONNEL SUPPLY, TELEPHONE ANSWERING, TICKET SALES

REPAIR OTHER THAN AUTOMOTIVE

- 5420 ELECTRICAL, WATCH, CLOCK, JEWELRY, ELECTRONIC
- 5422 RE-UPHOLSTERY, CANVAS, REPAIRS
- 5424 MACHINERY, EQUIPMENT REPAIR, WELDING SHOP
- 5446 APPLIANCE REPAIR
- 5426 MISC REPAIR, LOCKSMITH

HEALTH SERVICE

- 5430 PHYSICIAN, DENTIST, OPTOMETRIST, PSYCHIATRIST, ACCUPUNCYURE, RADIOLOGY, CHIROPRACTOR, CONSULTANTS, HYPNOSIS
- 5432 HOSPITALS
- 5434 NURSING AND PERSONAL CARE EXTENDED SERVICE, NURSING HOMES, HOMES FOR ELDERLY, PHYSICAL THERAPY, MASSAGE
- 5436 MEDICAL AND DENTAL LABS
- 5438 OTHER HEALTH SERVICES-REHABILITATION CENTERS, MEDICAL CLINICS, BLOOD BANK

LEGAL SERVICE

- 5440 ATTORNEYS, LAW LIBRARIES
- 5442 OTHER LEGAL SERVICE, STENOGRAPHER

FINANCIAL SERVICES

- 5450 BANKS CLEARING HOUSE ASSOCIATION
- 5452 OTHER CREDIT AGENCIES SAVINGS AND LOAN, CREDIT UNIONS, MANAGEMENT ASSOC. INVESTMENT COMPANIES, FINANCING AND INSTALLMENT LOANS
- 5454 SECURITY AND COMMODITY BROKERS, DEALERS, EXCHANGES AND SERVICE STOCKS & BONDS

INSURANCE AND REAL ESTATE

- 5460 INSURANCE COMPANIES, INSURANCE BROKERS
- 5462 REAL ESTATE AGENTS, REALTORS, TITLE ABSTRACT OFFICES, DEVELOPERS, HOME OWNERS ASSOCIATIONS, MORTGAGE BROKERS

MISC PROFESSIONSL SERVICES

- 5470 ENGINEERING, ARCHITECTURAL, SURVEYING, ACCOUNTING, DRAFTING, BOOKKEEPING, DETECTIVE, SECURITY GUARD, BODY GUARD, BURGULAR ALARMS

EDUCATIONAL SERVICE

- 5480 EDUCATIONAL INSTITUTIONS, (FLORIDA STATUTE 196.012(4). Exempt
- 5482 OTHER SCHOOLD AND EDUCATIONAL SERVICES BEAUTY AND BARBER, CHARM, DRIVING, KARATE

SOCIAL SERVICES

- 5490 JOB TRAINING, VOCATIONAL REHABILITATION, CHILD DAY CARE, RESIDENTIAL CARE, EDUCATIONAL GUIDANCE, PERSONNEL CONTRACTING SERVICES

AMUSEMENT AND RECREATION

- 5500 MOTION PICTURE PRODUCTION AND DISTRIBUTION, VIDEO & THEATRE PORDUCTION
- 5502 BWOLING ALLEYS, BILLIARDS, POOL, DARTS
- 5504 COMMERCIAL SPORTS, PROFESSIONAL SPORTS, CLUBS, GYMNASIUMS, RACE TRACKS, AEROBICS, TUMBLING
- 5506 TOURIST ATTRACTIONS, AMUSEMENT PARKS, AIR TOURS, FISHING GUIDE & CHARTER HOUSE TOURS
- 5508 MUSEFUMS AND ART GALLERIES
- S 5510 MISC AMUSEMENT AND RECREATION SERVICES, GOLF COURSES, COUNTRY CLUBS, S YACH CLUBS, VIDEO CLUBS

MEMBERSHIP ORGANIZATIONS

- 5520 BUSINESS, PROFESSIONAL, LABOR UNIONS, CIVIC, SOCIAL AND FRATERNAL, POLITICAL, NON-PROFIT ORGANIZATIONS
- 5522 RELIGIOUS ORGANIZATIONS

PUBLIC ADMINISTRATION

- 5530 GENERAL GOVERNMENT, COURTS, POLICE, FIRE, SAFETY, NATIONAL SECURITY, PUBLIC LJBRARY
- 5532- UPS, U.S. POSTAL SERVICE

COMMUNICATION

- 5540 TELEPHONE AND TELEGRAPH
- 5542 RADIO, AND TELEVISJON BROADCASTING
- 5544 PRINTING AND PUBLISHING NEWSPAPERS, BOOKS, MAGAZINES, TYPESETTING, PHOTO ENGRAVING, GRAPHICS
- 5546 OTHER COMMUNICATION SERVICES

ELECTRIC, GAS AND SANITARY SERVICES

- 5550 ELECTRIC POWER, ELECTRICAL CONTRACTOR
- 5552 GAS PRODUCTION AND DISTRIBUTION, PIPELINES
- 5553 WATER SUPPLY, SPRINKLER SYSTEMS
- 5556 SANITARY SERVICES(SEWERAGE, REFUSE, MOSQUITO CONTROL)

AUTOMOTIVE REPAIR AND SERVICES

- 5560 AUTO REPAIR GARAGE & AUTO BODY REPAIR
- 5562 SERVICE STATION-GASOLINE
- 5564 AUTOMOTIVE SERVICES PARKING, CAR WASH, TOWING,

PASSENGER TRANSPORTATION

- 5570 BUS LINE, TAXI, AMBULANCE, SCHOOL BUS, LIMO, TERMINALS

TRUCKING AND WAREHOUSE

- 5580 TRUCKING - LOCAL, LONG DISTANCE, MOVING AND HAULING TRASH
- 5582 PUBLIC WAREHOUSE, STORAGE, MINI STORAGE
- 5584 OTHER TRUCKING AND WAREHOUSING

WATER AND AIR TRANSPORTATION

- 5590 WATER TRANSPORTATION AND SUPPORT SERVICES, ALL MARINE REPAIR, MARINA, YACHT BASINS, YACHT BROKER, DIVE INSTRUCTIONS, DIVE CHARTER
- 5592 AIRLINES, HELICOPTER, PLANE CHARTER
- 5594 AIRPORTS AND TERMINALS

TRANSPORTATION SERVICES

- 5610 TRAVEL ARRANGEMENTS, TRAVEL AGENT

MISC SERVICE

- 5999 MISC SERVICE, SALVAGE, SPAS, SEWER DRAIN CLEANING, DELIVERY SERVICE, SWIMMING POOLS

SPECIAL

AGRICULTURAL PRODUCTION CROPS/LIVESTOCK

- 6702 VEGETABLES, MELONS, CITRUS, NUTS
- 6712 POULTRY AND EGG

AGRICULTURAL SERVICES

- 6722 VETERINARY SERVICE
- 6724 OTHER ANIMAL SERVICES, BREEDING, BOARDING, TRAINING
- 6726 LAND SCAPING AND LAWN AND GARDEN SERVICES

FISHING, HUNTING & TRAPPING

- 6740 COMMERCIAL FISHING

MINING AND QUARRYING

- 6760 CRUSHED AND BROKEN STONE
- 6762 SAND AND GRAVEL

CONSTRUCTION

- 6770 GENERAL BUILDING CONTRACTORS
- 6772 HIGHWAY AND STREET CONSTRUCTION
- 6774 HEAVY CONSTRUCTION

SPECIAL TRADE CONTRACTORS

- 6780 PLUMBING
- 6782 PAINTING, PAPER HANGING, DECORATING
- 6784 ELECTRICAL WORK
- 6786 MASONRY, STONE WORK, TILE SETTING, PLASTERING
- 6788 CARPETING AND FLOORING
- 6790 ROOFING AND SHEET METAL
- 6792 CONCRETE WORK
- 6794 WATER WELL DRILLING
- 6796 MISC SPECIAL TRADE CONTRACTORS

ACCOMMODATION

- 6800 SINGLE FAMILY RENTAL
- 6802 DUPLEX
- 6804 TRIPLEX
- 6806 QUADRIplex
- 6808 CONDO
- 6810 APARTMENT 10 or less units
- 6812 APARTMENT More than 10 units
- 6814 HOTEL/MOTEL
- 6816 ROOMING AND BOARDING HOUSE
- 6818 CAMPS
- 6820 BUILDING RENTAL
- 6822 BUILDING ON LEASED LAND
- 6824 FLOATING STRUCTURE - RESIDENTIAL
- 6826 FLOATING STRUCTURE - NON RESIDENTIAL
- 6830 MOBILE HOME
- 6832 MOBILE HOME ATTACHMENTS
- 6999 MISC SPECIAL CORPORATIONS ONLY

Appendix B

Monroe County Hurricane Andrew Business Damage/Recovery Assessment Survey

This brief questionnaire is intended to identify the negative impacts of Hurricane Andrew on your business and to what extent these negative impacts persisted following the hurricane. Your responses will be used to develop a hurricane recovery strategy for Monroe County businesses. Your participation in this survey will assist businesses such as yours, as well as all Monroe County residents.

Completion of the questionnaire will require only about 10 minutes. Where actual dollar estimates or percentages are requested, please use your best judgement. When considering your responses to the following questions, please do not include any of the impacts due to the March 1993 "No Name Storm". The following questions refer to your primary business establishment location. If you have more than one type of business and/or business location, please consider only one of these throughout your responses to the following questions.

1. Was your business located in Monroe County prior to and during Hurricane Andrew? Yes () No ()
If "No", please skip to question 10 and finish the questionnaire.

NEGATIVE IMPACTS YOUR BUSINESS EXPERIENCED

2. Did Hurricane Andrew have a "negative" impact on your business? Yes () No ()
If "No", please skip to question 10 and finish the questionnaire.

3. Please consider the following impacts your business may have experienced as a result of the hurricane. Then, indicate with an "X" the degree to which each item was a problem to your business.

	<u>No</u>				<u>Major</u>
	<u>Problem</u>				<u>Problem</u>
	1	2	3	4	5
* Structural damage to business facility	()	()	()	()	()
* Inventory damage/loss	()	()	()	()	()
* Reduction of ability to acquire new inventory	()	()	()	()	()
* Disruption of utilities services (water, electricity, sewage, refuse)	()	()	()	()	()
* Disruption of communication (telephone, fax, etc.)	()	()	()	()	()
* Employee resignations/relocations	()	()	()	()	()
* Overhead associated with hurricane (i.e. filing insurance claims, worker's compensation, or unemployment; rehiring/retraining, etc.)	()	()	()	()	()
* Reduction in numbers of customers	()	()	()	()	()
* Inability to attract required labor/loss of local labor pool	()	()	()	()	()
* Inability to transport product due to reduced airline service, trucking services, etc.	()	()	()	()	()
* Availability of staple supplies	()	()	()	()	()
* Security	()	()	()	()	()
* Other (_____)	()	()	()	()	()

4. Indicate with an "X" the approximate total length of time after the hurricane each of the following impacts persisted.

	<u>Months Following the Hurricane</u>				
	<u>1 or Less</u>	<u>2-3</u>	<u>4-6</u>	<u>7-12</u>	<u>Still Persists</u>
* Structural damage to business facility	()	()	()	()	()
* Inventory damage/loss	()	()	()	()	()
* Reduction of ability to acquire new inventory	()	()	()	()	()
* Disruption of utilities services (water, electricity, sewage, refuse)	()	()	()	()	()
* Disruption of communication (telephone, fax, etc.)	()	()	()	()	()
* Employee resignations/relocations	()	()	()	()	()
* Overhead associated with hurricane (i.e. filing insurance claims, worker's compensation, or unemployment; rehiring/retraining, etc.)	()	()	()	()	()
* Reduction in numbers of customers	()	()	()	()	()
* Inability to attract required labor/loss of local labor pool	()	()	()	()	()
* Inability to transport product due to reduced airline service, trucking services, etc.	()	()	()	()	()
* Availability of staple supplies	()	()	()	()	()
* Security	()	()	()	()	()
* Other _____	()	()	()	()	()

RECOVERY ASSISTANCE YOUR BUSINESS REQUIRED

5. Indicate what kind of assistance your business required immediately (within the first month) following the hurricane? (mark with an "X" as many as apply)

- | | |
|---|--|
| <input type="checkbox"/> debris removal | <input type="checkbox"/> insurance claims preparation assistance |
| <input type="checkbox"/> re-development of lost markets | <input type="checkbox"/> employee training/counseling |
| <input type="checkbox"/> loans for lost revenue, capital, inventory, etc. | <input type="checkbox"/> financial assistance/planning |
| <input type="checkbox"/> legal counseling | <input type="checkbox"/> other _____ |
| <input type="checkbox"/> building code/environmental regulations | <input type="checkbox"/> no assistance needed |

6. Indicate what kind of assistance your business continues to need as a result of the hurricane. (mark with an "X" as many as apply)

- | | |
|---|--|
| <input type="checkbox"/> debris removal | <input type="checkbox"/> insurance claims preparation assistance |
| <input type="checkbox"/> re-development of lost markets | <input type="checkbox"/> employee training/counseling |
| <input type="checkbox"/> loans for lost revenue, capital, inventory, etc. | <input type="checkbox"/> financial assistance/planning |
| <input type="checkbox"/> legal counseling | <input type="checkbox"/> other _____ |
| <input type="checkbox"/> building code/environmental regulations | <input type="checkbox"/> no assistance needed |

7. Were you aware of any federal, state, or local business-related assistance programs available to your business following the hurricane? Yes () No ()

8. Did you seek assistance from any of these programs? Yes () No ()

If "Yes", from which of the following programs did you seek assistance? Mark with an "X" each one you contacted. Then, indicate the degree to which these sources of assistance were helpful. (select as many as apply)

Mark here if contacted ↓	Not <u>Helpful</u>					Extremely <u>Helpful</u>
	1	2	3	4	5	
() Home and Personal Property Disaster Loans (SBA)	()	()	()	()	()	
() Disaster Housing Assis. Program (FEMA)	()	()	()	()	()	
() Emergency Assistance (Red Cross)	()	()	()	()	()	
() "Bridge Loan" Program (Fl. Dept. of Commerce)	()	()	()	()	()	
() Disaster Unemployment Assis. (Fl. Dept. Labor)	()	()	()	()	()	
() Tax Assistance/Business Management Programs	()	()	()	()	()	
() Insurance Information	()	()	()	()	()	
() Legal Services	()	()	()	()	()	
() Social Security Assistance	()	()	()	()	()	
() Other (_____)	()	()	()	()	()	

LOST SALES AND THE CUSTOMER GROUPS IMPACTED

The following question refers to any business sales (not physical damage) lost during the 12 months following Hurricane Andrew (the storm made landfall 24 August 92) that you attribute directly to the hurricane. Please use your judgement to estimate the values requested. NOTE the three groups of customers listed below: residents/local businesses (Monroe County residents and businesses), tourists, and "out-of-county" businesses (located out of Monroe County). Consider only those customer groups which apply to your business.

9. This question has three parts.

* **First**, please quickly estimate for each of the three groups of customers (in section A below) the reduction in total gross sales (in dollars) your business experienced as a result of the hurricane.

* **Second**, quickly estimate (in section "B" below) for each customer group what percentage the indicated reduction in sales represents of that expected for the same period during a typical year.

* **Third**, indicate (in section "C" below) how many months were required for the sales to each customer group to recover to a level that would have been expected for the same period during a typical year.

A		B		C
<u>Sales Reductions by Customer Group</u>		<u>Percentage Reduction from a "typical" year</u>		<u>Approximate Recovery Period</u>
Residents/local businesses	\$ _____	_____ %	_____ months	
Tourists	\$ _____	_____ %	_____ months	
Out-of-County businesses	\$ _____	_____ %	_____ months	

BRIEFLY DESCRIBING YOUR BUSINESS

The findings of this survey will be summarized by type of business and location in Monroe County (i.e., upper, middle, and lower Keys). Therefore, the following information will be very useful. Again, the following questions pertain to that specific business establishment and location considered in your answers to the previous questions.

10. Please indicate which of the following categories best describes your business? (Please mark only one with an "X")

- | | | |
|--|--|---|
| <input type="checkbox"/> Amusement/Recreation | <input type="checkbox"/> Commercial Fishing | <input type="checkbox"/> Construction/Contractor |
| <input type="checkbox"/> Eating/Drinking Establishment | <input type="checkbox"/> Dock, Yacht Basin, Marina | <input type="checkbox"/> Education |
| <input type="checkbox"/> Government Related | <input type="checkbox"/> Grocery | <input type="checkbox"/> Guide/Charter Service |
| <input type="checkbox"/> Health Service | <input type="checkbox"/> Insurance/Real Estate | <input type="checkbox"/> Landscaping |
| <input type="checkbox"/> Leasing/Rental | <input type="checkbox"/> Legal Service | <input type="checkbox"/> Manufacturing |
| <input type="checkbox"/> Motel/Hotel | <input type="checkbox"/> Non-medical Professional | <input type="checkbox"/> Personal/Business Services |
| <input type="checkbox"/> Private Association/Club | <input type="checkbox"/> Repair | <input type="checkbox"/> Retail Trade |
| <input type="checkbox"/> Transportation | <input type="checkbox"/> Wholesale Trade | <input type="checkbox"/> Other (_____) |

11. What is the zip code for the location of the business considered in the above responses? _____

12. How many people (full and part-time combined) does this particular establishment employ annually?

- 1-5 6-15 16-50 51-100 101-200 over 200

13. Please indicate this particular establishment's annual gross sales prior to the hurricane:

- under \$50,000 \$50,000-99,999 \$100,000-299,999 \$300,000-499,999
 \$500,000-999,999 \$1,000,000-4,999,999 \$5,000,000-9,999,999 \$10,000,000-over

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE!

(Please fold completed questionnaire and place in the provided postage-paid return envelope. Please mail immediately!)



UNIVERSITY OF
FLORIDA

Cooperative Extension Service

Institute of Food and Agricultural Sciences



BOARD OF COUNTY COMMISSIONERS

MAYOR, Jack London, District 2
Mayor Pro Tem, A Earl Cheal, District 4
Wilhelmina Harvey, District 1
Shirley Freeman, District 3
Mary Kay Reich, District 5

Dear Monroe County Business Owner/Manager:

The Monroe County Board of County Commissioners is interested in learning of the impacts experienced by local businesses in the aftermath of Hurricane Andrew. We know that some businesses suffered both short and long term negative effects. We need to develop an overall summary of the various impacts to give us an opportunity to implement an improved recovery plan for similar future catastrophes.

The County has obtained a grant from the Economic Development Administration to conduct a mail survey of County businesses to help us improve our recovery plans. You are one of a small sample of businesses chosen randomly to participate in this survey. Since your responses will also represent other businesses in your sector of the economy, who were not selected to participate, it is important that the enclosed questionnaire be completed and returned to us as soon as possible. This is a good opportunity for you to help your County government better protect your business and livelihood. Your participation is needed and is greatly appreciated.

All answers to the completed questionnaires will be treated as confidential and will be summarized by groups of businesses before presentation to government officials outside the University of Florida or to the public. No one except the researchers and yourself will know you were selected for this study.

If you have any questions about this survey, please feel free to call the County Extension Service at one of the phone numbers shown below. Please note that no postage is necessary on your part. Just put your completed questionnaire in the enclosed postage paid envelope and drop it in the mail. Again, we ask that you please return the completed questionnaire as soon as possible.

Thank you again for your help and cooperation. Your participation is greatly appreciated.

Sincerely,

James Roberts
Monroe County Administrator

Douglas Gregory
Director, County Extension Service
Telephone Numbers:
Monroe County Extension Service
Lower Keys: 292-4501
Middle Keys: 743-0079, ext. 4501
Upper Keys: 852-1469, ext. 4501



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BOARD OF COUNTY COMMISSIONERS

MAYOR, Jack London, District 2
Mayor Pro Tem, A Earl Cheal, District 4
Wilhelmina Harvey, District 1
Shirley Freeman, District 3
Mary Kay Reich, District 5

REPLY TO:

Dear Monroe County Business Owner/Manager:

We are writing you concerning the questionnaire we sent to you two weeks ago asking about the negative impacts of Hurricane Andrew on your business. We have not yet received your completed questionnaire. If you have already completed and mailed back the questionnaire, we would like to take this opportunity to thank you for your help and cooperation.

We understand how busy you are, particularly this time of year, but we greatly need your assistance. This is your chance to help your County government better prepare a hurricane recovery plan that could mean the survival of your business. The usefulness of our results depends on how accurately we are able to describe the Hurricane's impact on the various sectors of our economy. So please fill out the questionnaire if you have not already done so and return it to us today so we can begin compiling the results.

Because your views are so important to us, we are sending you a replacement questionnaire in case the original one was misplaced. All answers to the completed questionnaires will be treated as confidential and will be summarized by groups of businesses before presentation to government officials outside the University of Florida or to the public. No one except the researchers and yourself will know you were selected for this study.

If you have any questions about this survey, please feel free to call the County Extension Service at one of the phone numbers shown below. Please note that no postage is necessary on your part. Just put your completed questionnaire in the enclosed postage paid envelope and drop it in the mail. We ask that you please return the completed questionnaire as soon as possible.

Thank you again for your help and cooperation. Your participation is greatly appreciated.

Sincerely,

James Roberts
Monroe County Administrator

Douglas Gregory
Director, County Extension Service
Telephone Numbers:
Monroe County Extension Service
Lower Keys: 292-4501
Middle Keys: 743-0079, ext. 4501
Upper Keys: 852-1469, ext. 4501

Appendix C

Q. 10

1. Pet Grooming
2. Skin care for the Pier House
3. Aquaculture Farm
4. Laundry Mat
5. Beauty Salon
6. Chamber of Commerce
7. Pet Sitting
8. Designer
9. Marine Related Services
10. Sign Shop
11. Ladies Clothing
11. Upholstery
12. Hairdresser
13. Hair Salon
14. Swimming Pool Maintenance
15. Cleaning
16. Party Boat Fishing
17. Professional - Medical
18. Massage Therapy
19. Funeral Homes
20. Hair Styling
21. Veterinarian
22. Lawn Care
23. Publishing
24. Beauty Shop
25. Mobile Vaccination Service
26. Sign Shop
27. Laundermat
28. Jewelry
29. Wholesale & Retail
30. Printing Graphics Copy Services
31. Dry Cleaner
32. Lawn Maintenance
33. Silkscreen Printer
34. Publishing
35. Animal Breeder
36. Clothing
37. All Handmade Items
38. Coin Laundry
39. Interior Design/Decorating
40. Dance - Acrobatics
41. Research
42. Retail & wholesale sale of seafood
43. Hairdresser
44. Veterinary Medical Office

Q. 10 (Continued)

45. Funeral Home
46. Maid Service
47. Hair Salon
48. Museum
49. Advertising
50. Store
51. Coin Laundry
52. Publishing
53. Media/Video Production
54. Beauty Salon
55. Barber Shop
56. Beauty Shop
57. Mail Order
58. Trap Building
59. Shopping Center
60. Shopping Center
61. Lawn Maintenance
62. Shrimp Farm
63. Apartment Rental
64. Generator
65. Dry Cleaners
66. Beauty Salon
67. Maintenance/Repair/janitorial
68. Real Estate Advertising
69. Veterinary
70. Engraving - Trophies
71. Veterinary
72. Sign Shop
73. Barber Shop
74. Veterinary

Q. 3

1. 50% work force lined in South Miami. Trouble concentrating on work with other problems
2. Tourism was way down. No air conditioning - hard on computers.
3. Loss of business - Everybody up north thought the Keys were wiped out when we were open for business. Thanks to the media.
4. Loss of income due to lack of tourism due to belief Keys were destroyed due to poor media broadcasts.
5. Gear (Traps)
6. Insurance rate increase
7. Loss of business (customers)
8. News media misinformation
9. Loss of customer (Tourist)
10. Burglar alarm systems
11. Many people we worked with - painters, wall paper hangers, upholsters, lost their homes and left the area.
12. Extra week - unbillable
13. Inability to recover accounts receivable (funds) from clients in Homestead, FL
14. Get us the Hell away from a tourist only economy. It is stupid to go on killing our commercial fishing industry. They go on working & producing until the wind starts blowing. The tourist come and leave weeks before the storm arrives.
15. Could not get ice for commercial vessel to make trip.
16. No business
17. Loss of income & increased accounts receivable

Q. 4

1. Workforce - South Miami residents
2. Tourism
3. Lack of tourism income
4. Gear (Traps)
5. Mental State
6. Dive Resort (Scuba Diving)
7. Clothing, sportswear
8. Insurance rate increase
9. Customers left area
10. Number of fish down
11. Lack of fish/lobster
12. Much higher material cost
13. Reclaim/fix landscaping
14. No time - No impacts
15. Inability to recover accounts receivable (funds) from clients in Homestead, FL
16. Rebuild fishing gear
17. Barber Shop
18. Janitorial
19. No customers - Insurance Agents took all hotel rooms; left very few for tourist.
20. Loss of income & increase accounts receivable

Q. 5

1. Employee financial assistance
2. Ads for tourism
3. Could not bring lobster back
4. Security
5. Lost boss
6. Extra labor
7. Change in product sold - different needs now required in clothing
8. Customers
9. Time
10. Government Sham, there was no real money available. Just Bull Shit.
11. Utility Electric
12. No assistance from FEMA
13. Loss of income
14. Loss of income
15. Will never pay - act of God
16. We had a major hurricane recovery fund set aside in our bank account.
17. Lives off credit cards if necessary
18. Loaned personal \$ to keep store open

Q. 6

1. More Workers
2. Lower income figures for license renewal
3. Insurance Increases
4. Lost boss
5. Customers
7. Get 80% of the government the hell out of here and we will do ok on our own.
8. Insurance will never pay - act of God. Paid Business Interruption Insurance for 14 years.
Paid us nothing due to down power lines.
9. Paying back loans

Appendix C.6 - "Other" Responses to Question 8

Q: 8

1. The SBA is a joke
2. Too involved

Appendix D

(Due to the volume of data, these frequency tables
are available only upon special request from the author)