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Task 3.6

INLAND HURRICANE SHELTER PLAN

Withlacoochee Regional Planning Council

Prepared by the

September, 1982

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The Regional Disaster Preparedness Advisory Committee is composed of government officials and citizens who are involved in various aspects of disaster preparedness. This study would not have been possible without the continuous guidance and review function provided the Committee. The Withlacoochee Regional Planning Council extends its gratitude to the members of the Committee for their time, effort, and invaluable assistance provided during the preparation of this plan.

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FOREWORD

Based upon historical records of hurricane activity, fifty-two major hurricanes have struck the U. S. coastline between Texas and Maine since 1900. Twenty of these have struck the State of Florida. In the Withlacoochee Region, thirty-one hurricanes have passed within 120 nautical miles of Crystal River in the years since 1886.

Aware of this threat, the Florida Department of Community Affairs, through regional planning councils, has embarked on a comprehensive hurricane evacuation planning effort. This effort eventually is intended to develop into a statewide hurricane evacuation plan. The objective of the program is to provide the necessary tools to guide State and local decision makers in responding effectively to the threat associated with a hurricane's storm surge and accompanying wind and rainfall. This planning effort is a coordinated endeavor relying on the resources of federal, state, regional and local planning agencies in the following manner:

1. Federal - funding and logistical support.

2. State - coordination, funding support, technical review and assistance.

3. Regional - regional coordination and development of quantitative information bases to formulate regionally oriented warning, evacuation, shelter and public information programs.

4. Local - active participation in developing information bases and development of detailed operational procedures for emergency response.

Since a hurricane's destructive forces are not limited to one community or county but extend region wide, mitigation of the threat requires that communities share evacuation routes and shelters as well as develop intergovermental coordination. Appreciating the regional aspects of hurricane planning, regional planning councils were selected to carry out the individual studies which make up the statewide Comprehensive Integrated Evacuation Plan.

The Withlacoochee Regional Planning Council is one of a number of planning councils throughout the State which are supporting this effort. This report, along with the Hurricane Evacuation Plan, is designed to provide a coordinated plan for evacuation and provision of shelter for persons endangered by an approaching hurricane.

CHAPTER I

INTRODUCTION

Purpose

The Inland Shelter Program is the second phase of a statewide hurricane protection plan. The first phase of this plan, the hurricane evacuation strategy, provides an indication of the probable effects of various categories of hurricanes on coastal areas, an estimate of the number of persons needing to be evacuated during each type of hurricane, and recommended evacuation routes for coastal residents. Using this information, the Inland Shelter Program will determine shelter needs available facilities, and inland evacuation routes. It will also provide a mechanism for making shelter assignments and implementing inter-regional evacuation procedures.

The basic premise of the Inland Shelter Program is that, during a hurricane, residents will evacuate coastal areas and seek shelter in more secure inland areas. Because there are insufficient numbers of shelter facilities in the upland areas of coastal counties as well as within inland areas adjacent to coastal counties, it is assumed that many of these people will come to West Central Florida in search of shelter. Besides coastal evacuees, some hurricanes may also necessitate evacuation of threatened residents of West Central Florida, primarily persons living in mobile homes and those living in areas subject to freshwater flooding. The primary purpose of the Inland Shelter Program, then, is to ensure that adequate shelters will be available for both coastal evacuees and inland residents needing shelter during a hurricane.

Scope of Study

The Inland Shelter Study is scheduled to be a two-year project. The first year of the study involved collecting of data on expected demand for shelters, evacuation routes, and current capacity of public shelters. The second year of the project will focus on the expansion of usable shelter capacity in the region and the improvement of public information/ awareness of hurricane hazards. The extent of the present study is limited to Marion and Sumter Counties. A separate hurricane evacuation plan is being written for the coastal counties of Levy, Citrus and Hernando.

Specific tasks accomplished in completing the Inland Shelter Study are:

1. Determination of shelter usage relative to storm event by storm magnitude.

2. Inventory of designated inland county public shelter characteristics and shelter capacity analysis.

3. Shelter feasibility analysis.

4. The analysis of probable tendencies of potential inland evacuees.

5. The identification of additional shelter space needed to house coastal evacuees from the Tampa Bay Planning Region.

6. The development of intra- and inter-regional evacuation routes and shelter assignments.

7. The identification of sites for shelter checkpoints.

8. The development of a proposed institutional framework to formulate a coordinative mechanism for implementing inter-regional evacuation procedures.

9. The continuous participation, involvement, and coordination by the participating agencies and entities that are relevant to the plan.

Legal Authority For Ordering Evacuations

Authority to order evacuation from an approaching hurricane is conferred to the governor by Florida Statute Chapter 252.36(5)(e); stating that the governor may:

> "Direct and compel the evacuation of all or part of the population from any stricken or threatened area within the state if he deems this action necessary for the preservation of life or other disaster mitigation, response, or recovery."

The same power is also delegated to the governing body of each city and county of the state by Florida Statute 252.32, and Executive Order 80-29. This power to order an evacuation exists without prior declaration by other levels of government. For example, in the event that a county or state fails to order evacuation as early as a city may feel is required by specific location conditions, the municipality may order evacuation within its corporate limits. However,

declarations and evacuation orders of higher levels of government are binding upon lower levels of government. For example, a state declaration is binding upon counties and municipalities, and a county order is binding upon a municipality.

A need exists for coordination between equal and separate levels of government and private agencies to ensure the availability of adequate resources to support evacuation. This will enable the release of the resources of higher levels of government which would not be available without an emergency declaration by that higher level of government.

Agencies that would need to be involved in the coordination effort include the several city and county (but primarily county) disaster preparedness agencies.

An addition to local agencies is the Bureau of Disaster Preparedness, under the Division of Public Safety Planning and Assistance, Department of Community Affairs. This Bureau is empowered to make official recommendations for prevention and preparedness measures designed to eliminate or reduce disasters or their impact. As a consequence, the Bureau of Disaster Preparedness performs the primary staff function to the governor during disaster emergencies and recommends to the governor the nature, extent, and timing of an evacuation order.

First among private agencies in coordination is the American National Red Cross. The local chapters of the Red Cross are responsible for the overall management of public natural disaster shelters as designated by local government. This includes the provisions of trained staff, food supplies, and registration procedures throughout the duration of the shelter stay. Such responsibility has been delegated by Congressional charter under Public Law 58-4. A mutual agreement between the American Red Cross and the Florida Department of Health and Rehabilitative Services (HRS) states that HRS will lend selected staff to the Red Cross when a need for supplemental personnel arises. A number of other independent public and private agencies possess a role, including school districts, Salvation Army, churches, police and fire agencies, utility companies, and so forth.

The vast array of authorities who may issue an evacuation order and who may participate in an evacuation clearly illustrates the need for a firmly established on-going intergovernmental coordination process. The results of this study will contribute to the data base necessary to ensure effective coordination as well as provide a tool the local decision-maker can use to analyze his jurisdiction's shelter supply in relation to surrounding jurisdictions.

Description of Study Area

The Withlacoochee Region is made up of five counties: Citrus, Hernando, Levy, Marion, and Sumter. It includes 22 municipalities and encompasses 4,532 square miles. The region is located in the west-central area of Florida, with Citrus, Hernando, and Levy Counties bordering the Gulf of Mexico. At the present time the region retains its primarily agricultural character. Only Ocala is large enough to be designated as a Standard Metropolitan Statistical Area (SMSA) by the U. S. Bureau of the Census.

While the region contains only one SMSA, it is surrounded by SMSA's to the north, the east, the southeast, and the south. The region has not yet experienced urban encroachment from the surrounding SMSA's, although there has been a large influx of persons from the more urban areas who find the still rural character of the region inviting.

The study area of this report covers Marion and Sumter Counties. Marion County is located near the geographic center of Florida. It is bounded by Alachua County and Putnam County on the north; Lake County on the east; Citrus; Sumter and Lake Counties on the south; and Levy County on the west. The land surface is slightly irregular with gently sloping hills. Elevations range from a low of 50 feet to a high of 200 feet above sea level. Growth has been experienced throughout the county, especially in Ocala.

Sumter County is characterized by nearly level plains and swamps, gently sloping in a westerly direction toward the Withlacoochee River. Ground elevations range between 40 to 140 feet above sea level. Sumter is a rural and agriculturally oriented county. Its western borders with Citrus and Hernando Counties are the Withlacoochee and Little Withlacoochee Rivers. Polk County borders it on the south and southwest. Marion County makes up its northern border, while Lake and Polk Counties account for its eastern border.

Growth in Sumter County has been moderate, with the greatest growth occurring between 1970 to 1979, when the population increased from 14,839 to 22,041 or 7,202 people. It is expected there will be little encroachment on land used as agriculture, and Sumter County will retain its rural status. As expected, growth is taking place around the Lake Panasoffkee area in the form of a major retirement development. The Wildwood area in the northeastern portion of the county is not only experiencing growth in the form of residential development but in industrial development as well.

The inland counties, while not subject to storm surge hazards, are suseptible to high winds and freshwater flooding. Both counties are susceptible to high wind hazards because a

great many residents occupy mobile homes. As of January 1981, Marion County had 21,701 mobile home units and Sumter County had 5,719 units.

Two major evacuation routes through the inland counties are U.S. Rt. 301 and I-75. Both routes are expected to carry significant portion of the north bound evacuees in the event of a major hurricane in the Tampa Bay Region.

CHAPTER II

CURRENT SHELTERING

Hurricane Hazard Analysis

The major hazards associated with a hurricane are: 1. storm surge and saltwater flooding; 2. high winds; and 3. fresh water flooding. In the inland counties the hazards relevant to potential inland area evacuation are limited to freshwater flooding and high winds.

The Impacts of Freshwater Flooding

Freshwater flooding occurs as a result of rainfall before, during and after a hurricane. About 6 to 12 inches of rainfall can be expected to accompany a hurricane although no predictive tools are available for determining the rate and geographic distribution of the rainfall. In Marion and Sumter Counties the problems associated with freshwater flooding during a hurricane include: lake and river flooding necessitating evacuation of homes; and inundation of possible evacuation routes. Freshwater flooding in the inland counties is usually slowly rising water that does not create a life threatening situation.

The Impact of Hurricane Winds

Hurricane force winds are defined as attaining and exceeding sustained wind velocities of 74 mph; sustained winds being defined as the average wind value for 1 minute interval. There have been reported cases of hurricane winds reaching as high as 190 mph. In addition to sustained winds, peak gusts are also a factor to consider. The peak gust is the highest, instantaneous wind-speed value observed; the damage potential induced by gusts is generally greater than even that of hurricane-generated tornadoes.

Although the impact of sustained winds on large building structures has been examined using wind-tunnel tests and numerical modeling procedures, no experiments in the real atmosphere have been conducted to determine the impact of hurricane gusts on structures. However, it is clear that sustained hurricane force winds and peak gusts can cause roof failure, the outward collapse of walls and glass openings, and enormous agricultural losses.

It should be recognized that structural losses due to wind alone, in the absence of an earlier rupture or weakening from a structure by rising water, can be virtually eliminated in new construction. This can be accomplished through using appropriate building standards such as the South Florida Building Code although some increase in building costs can be expected.

In the Withlacoochee Region, mobile homes are the structures most vulnerable to hurricane force winds. They are necessarily of lightweight construction, with generally flat sides and ends. Because of these characteristics, the winds of hurricanes can toss mobile homes around, rolling them over and over to complete the destruction. In addition, mobile homes are also more susceptible to damage from flying debris.

Although local regulations require that mobile homes be anchored to withstand high winds with "over-the-top" and frame tiedowns, anchorage system requirements usually are designed only to withstand a wind velocity of from 70 mph to 100 mph. In addition, the threat of flying debris is not mitigated by tiedowns. Because hurricane winds can reach 190 mph, the National Weather Service recommends that mobile home residents move to more sound structures prior to the onset of hurricane winds.

Not only must the high winds hazard be considered for its ability to damage property, but also for its ability to interrupt evacuation efforts. Evacuation activities cannot be safely carried out after the arrival of sustained gale force winds (40 mph), generally several hours before hurricane eye landfall. Therefore, it is recommended that all evacuees should have completed their movement to safe destinations before the arrival of these winds.

Hazard Analysis Concept and Methodology

The extent of the evacuation of inland areas will be dependent upon the intensity of the wind and rainfall. For purposes of this analysis, several assumptions have been made about inland hurricane hazards:

1. That the rainfall associated with the hurricane will be sufficient to cause a 100-year flooding event.

2. That the onset of a hurricane of any category will trigger the evacuation of all persons dwelling in mobile homes.

The population at risk as a result of freshwater flooding in the inland counties was determined by counting the number of housing units located in flood prone areas. Areas of flood hazard in Marion and Sumter Counties have been mapped by the United States Geological Survey and by the Federal Emergency Management Administration (under the flood insurance program.)

Aerial photographs, taken in 1980 and 1981, were then examined in relation to the flood hazard area and the housing units counted. The housing unit count is summarized in Appendix B and C.

The flooding information available reflects the conditions of the 100-year flooding event. It is assumed that rainfall of 6" - 12" can be expected to accompany hurricane activity. The number of flood prone housing units in each county was multiplied by the average household size of that county to obtain the population at risk from freshwater flooding.

The at-risk population due to wind hazard was calculated by multiplying the number of mobile homes in each county by the average household size for that county. The number of mobile homes was derived from the 1980 census and bi-annual occupancy inspection reports to January, 1981. The average household size for Marion and Sumter counties is 2.6 and 2.7 persons per household respectively. (This information was obtained from the Florida Statistical Abstract, 1980.)

Hazard Analysis Results

The at-risk population for Marion and Sumter counties is summarized in the tables that follow. These tables show that the total population at risk from a hurricane amounts to 73,266 people with 57,533 people in Marion County and 15,733 in Sumter County requiring shelter.

Table 2-1

ESTIMATE OF MOBILE HOME POPULATION
IN MARION AND SUMTER COUNTIES
1981

	Mobile Homes		Average Household Size-1980	Mobile Home Population
Marion	21,701	X	2.6	56,423
Sumter	5,719	X	2.7	15,441
TOTAL				71,864

Source: 1980 Census, bi-annual occupancy inspection reports, to January, 1981.

TABLE 2-2

POPULATION SUBJECT TO FRESHWATER FLOODING

	Housing Units in Flood Prone Area		Average Household Size - 1980	Estimated Population Subject to Flooding
Marion	427	X	2.6	1,110
Sumter	108	X	2.7	292
				1,402

Source: Florida Statistical Abstract, 1980
Withlacoochee Regional Planning Council staff, March, 1982.

Inland Shelter Characteristics And Capacity Analysis

Public Shelter Inventory

An inventory of the shelters in the inland counties of the Withlacoochee Region was conducted in February and March of 1981. These shelters will provide protection from the elements for the duration of a hurricane event. To be truly effective, public shelters need independent water, sewer and emergency power systems. They also need to be accessible in times of heavy rainfall.

The suitability of a structure as a public hurricane shelter depends upon several specific factors. These include location, accessibility, parking facilities, building characteristics and amenities, kitchen facilities and so on. (The criteria used to evaluate the public shelters in Marion and Sumter are listed in Appendix D.) All primary shelters, designated by the county civil defense director, are those structures that are structurally sound and that do not have major flooding problems.

To estimate the planned capacity of the inland shelters it is assumed the evacuees will require either 20 sq. ft. per person for a 24 hour stay, or 40 sq. ft. per person for a 48 hour stay. The capacity of a shelter is directly related to suitable square footage present in the structure. Areas suitable for the sheltering of evacuees must have few or small windows to prevent injury from flying glass.

The criteria used to analyze shelter space are as follow:

usable	- An area consisting of no windows or a small percentage of windows.
questionable	- An area consisting of one wall covered with a moderate to high percentage of windows.
unusable, not counted as space	- An area consisting of two walls covered with a moderate to high percentage of windows.
unusable, not counted as space	- Portable buildings, restrooms, storage areas, kitchen, offices, heavy equipment areas, maintenance rooms, clinics, etc.

Sumter County

Sumter County public shelters are school buildings with a total capacity of 6,407 people at 20 sq. ft. per person. These shelters are listed in Table 2-3 below.

TABLE 2-3

SUMTER COUNTY PRIMARY SHELTERS

Primary Shelter	Address	Capacity 20 sq. ft.
Bushnell Elementary School	Flannery Ave., Bushnell FL 33531	74
North Sumter Intermediate School	Huey St., Wildwood, FL 32785	462
North Sumter Primary School	Warfield Ave., Wildwood, FL 32785	140
South Sumter High School	Highway 475 North, Bushnell, FL 33513	1692
South Sumter Middle School	N. W. 10th Street, Webster, FL 33597	948
Webster Elementary School	Highway 471, Webster, FL 33597	514
Wildwood High School	Huey St., Wildwood, FL 32795	1532
Wildwood Middle School	Fruitland Park Road, Wildwood, FL 32785	1045
TOTAL		6407

Source: Withlacoochee Regional Planning Council staff, Sumter County Shelter Inventory, March, 1982.

Marion County

The Marion County public shelter inventory reveals that about 29,300 persons could be accommodated for a stay under 24 hours (using the 20 sq. ft. per person criteria). This inventory must be regarded as a preliminary list as the survey of Marion County churches has not been completed. Marion County primary shelters are shown in table 2-4.

TABLE 2-4

MARION COUNTY PRIMARY SHELTERS

Name of Structure	Address	Shelter Capacity at 20 Sq. Ft./Person
Belleview Elementary	5556 S.E. Agnew Road Belleview	166
Belleview-Santos Upper Elementary	N. Hwy. 444 Belleview	810
College Park Elementary	3155 S.W. 26th Street Ocala	560
Dunnellon Elementary	Chestnut Street Dunnellon	480
Dunnellon High School	Chestnut Street Dunnellon	1,452
East Marion Elementary	County Road 326 Lynne	1168
Eighth Street Primary	513 S.E. 8th Street Ocala	536
Fessenden Elementary	State Road 25A Martin	836
Forest High School	1614 S.E. Ft. King St. Ocala	1672
Fort King Middle	545 N.E. 17th Street Ocala	1010
Ft. McCoy Elementary	State Road 315 Fort McCoy	265
Hillcrest	3143 S.E. 17th Street Ocala	66
Howard Upper Elementary	306 N.W. 7th Avenue Ocala	213
Lake Weir Middle	Sunset Harbor	1600
Lake Weir High	State Road 464	3346

MARION COUNTY PRIMARY SHELTERS (cont'd)

Name of Structure	Address	Shelter Capacity at 20 Sq. Ft./Person
Madison Street Primary	1239 N.W. 4th Street Ocala	812
Marion Education Resource Center	2091 N.E. 35th Street Ocala	180
North Marion High	State Road 329 Sparr	2696
North Marion Middle	Lower Sparr Road Sparr	3896
Oakcrest Elementary	1156 N.E. 28th Street Ocala	245
Reddick-Collier Elementary	State Road 25A Reddick	774
Sparr Elementary	State Road 329 Sparr	282
Stanton-Weirsdale Elem.	W. Hwy. 42 Weirsdale	512
Vanguard High	7 N.W. 28th Street Ocala	4854
Wyomina Elementary	511 N.E. 12th Avenue Ocala	898
TOTAL		29,329

Source: Withlacoochee Regional Planning Council staff, Marion County Shelter Inventory, March, 1982.

Shelter Feasibility Analysis

Marion County Shelter Feasibility Analysis

In Marion County, most buildings designated as primary shelters do not have auxiliary power or an available emergency water supply. Water and wastewater treatment are primarily provided by municipal service, although some utilize wells, septic tanks, and on-site wastewater treatment plants. Most of the kitchen facilities require electric power for cooking, however, a significant percentage have gas or a combination of gas and electric. Ample parking may be a problem at some shelters due to a small number of parking spaces or a limited area for potential parking. This information is displayed in tables 2-5 and 2-6.

Most shelters do not have an infirmary as such, but do have some cots and essential first-aid supplies. The adequacy of first-aid facilities is dependent upon the amount of people with injuries and the severity of the injury. The amount of food available will vary according to the amount of people seeking shelter, most of the people interviewed for the shelter survey indicated they could provide food service for a few days at most.

In addition, several shelters have facilities to accommodate the elderly and handicapped, a means of transportation on site, and access to a ham radio. These are listed in the comments section of table 2-6.

TABLE 2-5

MARION COUNTY PRIMARY SHELTER CHARACTERISTICS

Shelter Name	Independent Power	Independent Water	Sewage Septic/Sewer	Kitchen Gas/Electric
Belleview Elementary	No	No	Sewer	Electric
Belleview-Santos Upper Elementary	No	No	Septic	Gas & Electric
College Park Primary	No	No	Sewer	Gas
Dunnellon Elementary	No	No	Sewer	Electric
Dunnellon High	No	No	Sewer	-
East Marion Elementary	No	No	Sewer	Electric
Eighth Street Elementary	No	No	Sewer	Gas
Fessenden Elementary	No	No	Sewer	Electric
Forest High	Yes, Science Building	No	Sewer	Gas & Electric
Fort King Middle	No	No	Sewer	Electric
Fort McCoy Elementary	Yes, Whole School	No	Septic	Gas & Electric
Hillcrest School	No	No	Sewer	Electric
Howard Middle	No	No	Sewer	Gas & Electric
Howard Upper Elementary	No	No	Sewer	Electric
Lake Weir High	Yes, Lights	No	Sewer	Gas & Electric

MARION COUNTY PRIMARY SHELTER CHARACTERISTICS (cont'd)

Shelter Name	Independent Power	Independent Water	Sewage Septic/Sewer	Kitchen Gas/Electric
Lake Weir Middle	No	No	Sewer	Electric
Madison Street Primary	No	No	Sewer	Electric
Marion Educational Resource Center	No	No	Septic	Electric
North Marion High	No	No	Sewer	Electric
North Marion Middle	Yes, Whole School Battery, 24 hours	2 large reserve tanks approx. 20,000 gal.	Septic	Gas & Electric
Oakcrest Elementary	No	No	Sewer	Electric
Reddick-Collier Elementary	No	No	Septic	Gas
Sparr Elementary	Yes, Hallway Batter	No	Sewer,cafeteria	Gas & Electric
Stanton Weirsdale Elem.	No	No	Sewer, Pkg. Plant	Gas & Electric
Vanguard High	No	No	Sewer	-
Wyomina Park Elementary	No	No	Sewer	-

Source: Withlacoochee Regional Planning Council staff, Shelter Inventory, March, 1982.

TABLE 2-3

MARION COUNTY SHELTERS:
VEHICLE CAPACITY AND GENERAL COMMENTS

Shelter Name	Vehicle Capacity # Parking Spaces	Vehicle Capacity Potential Acres	General Comments
Belleview Elementary	-	8-9	Access to ham radio
Belleview-Santos Upper Elementary	65	5	Facilities to accommodate elderly and handicapped
College Park Primary	70	-	
Dunnellon Elementary	21	-	
Dunnellon High	-	-	
East Marion Elementary	0	-	
Eighth Street Elementary	46	-	Parking area at Osceola Middle School
Fessenden Elementary	50	-	
Forest High	450	-	
Fort King Middle	40	8	
Fort McCoy Elementary	-	2	
Hillcrest	10	5	
Howard Upper Elementary	35	2	Hallways are the only primary shelter areas
Lake Weir High	400	20	Possible problems with parking outside of lot

VEHICLE CAPACITY AND GENERAL COMMENTS: MARION COUNTY (cont'd)

Shelter Name	Vehicle Capacity # Parking Spaces	Vehicle Capacity Potential Acres	General Comments
Lake Weir Middle	1	15-20	
Madison Street Primary	-	1	
Marion Educational Resource Center	-	-	
North Marion High	-	-	
North Marion Middle	-	20	
Oakcrest Elementary	40	15	Use of cafeteria and stage only in extreme emergency
Reddick-Collier Elem.	-	-	
Sparr Elementary	30	1/2	
Stanton-Weirsdale Elem.	35	5	
Vanguard High	-	-	
Wyomina Park Elementary	-	-	

Source: Withlacoochee Regional Planning Council staff, Marion County, Shelter Inventory, March, 1982.

Sumter County Shelter Feasibility Analysis

Of all the shelters surveyed in Sumter County only two were equipped with an auxiliary source of electrical power: South Sumter High School, and Wildwood High School.

Most shelters have kitchen facilities that operate on electrical power, making cooking impossible in the event of a power failure. Another concern in the event of a power failure is the interruption of water supply and the operation of sewage systems. The need for dependable water and sewer systems is crucial to the safe operation of a public shelter.

As is the case in Marion County most shelters in Sumter County have minimal emergency medical facilities. Most shelters have a small infirmary room with one or two cots and a small first aid kit.

The Sumter County primary shelter characteristics are summarized in Tables 2-7 and 2-8.

TABLE 2-7

SUMTER COUNTY PRIMARY SHELTER CHARACTERISTICS

Shelter	Independent Power	Independent Water	Sewage Septic/Sewer	Kitchen Gas/Electric
Bushnell Elementary School	No	No	Septic	Electric
North Sumter Intermediate School	No	No	Sewer	Electric
North Sumter Primary School	No	No	Sewer	Gas
South Sumter High School	Yes, Whole School	Yes	Septic	Electric
South Sumter Middle School	No	Yes	Septic	Gas
Webster Elementary School	No	Yes	Septic	Gas
Wildwood High School	Yes, Whole School	No	Sewer	Electric
Wildwood Middle School	No	No	Sewer	Electric

Source: WRPC staff, Sumter County Shelter Inventory, March, 1982.

TABLE 2-8

SUMTER COUNTY SHELTERS: VEHICLE CAPACITY AND GENERAL COMMENTS

Shelter	Vehicle Capacity Acres	Parking Spaces	Comments
Bushnell Elementary School			
North Sumter Intermediate School	5	50	
North Sumter Primary School	5	60	
South Sumter High School	4	150	All classrooms have small windows
South Sumter Middle School	-	25	Drainage problems
Webster Elementary School	3	50	Septic problems
Wildwood High School	3	-	
Wildwood Middle School	8	50	

Source: Withlacoochee Regional Planning Council staff, Sumter County Inventory, March, 1982.

The shelters designated in this survey are for the most part, without a source of auxiliary power. In the event that a hurricane moves inland causing widespread power disruption, most of the shelters would be without electricity or potable water. For purposes of disaster planning the worst probable case must be assumed in which widespread power failure occurs due to the breakdown of overhead power lines.

The facilities that could continue to operate in the event of a power failure are listed in the following table. This amounts to shelter space for about 9,057 persons.

Table 2-9

SHELTERS WITH EMERGENCY ELECTRICAL POWER

Marion County	Capacity
Forest High	1,672
Ft. McCoy Elementary	265
North Marion Middle	3,896
Sumter County	
South Sumter High School	1,692
Wildwood High School	1,532
TOTAL	9,057

Many more shelters will be acceptable if an auxiliary supply of electricity is made available for each shelter. An emergency supply of potable water is also necessary to insure that the restrooms remain operational. Without auxiliary electricity and water only about 9,000 persons can be accommodated in the shelters. On the other hand, should the shelters be equipped with emergency electricity and water a much greater number of persons may be sheltered.

Coastal Shelter Demand

Introduction

The demand for shelter services from coastal evacuees will be a major factor in determining the shelter requirements of the inland counties of the Withlacoochee Region. During a hurricane event, inland areas are expected to receive a substantial number of coastal residents evacuating from the most severe hurricane hazards. Marion and Sumter Counties will probably absorb a considerable number of those shelter-bound coastal evacuees. For planning purposes it is necessary to estimate just how many coastal residents will come to the inland counties seeking public shelters under various hurricane conditions

To develop estimates of inland shelter demand from coastal evacuees, information from a variety of sources is used.

The Bureau of Disaster Preparedness, Department of Veteran and Community Affairs has done research in this area relating to coastal demand for shelter facilities, identification of evacuation routes and expected numbers of evacuees by evacuation route. The Bureau's research relevant to the Withlacoochee Region is included in this report.

Another useful source of estimates of coastal evacuees is found in the Tampa Bay Region Hurricane Evacuation Study. This study contains projections of the evacuation population as well as the destinations for each of several hurricane scenarios. The highly populated Tampa-St. Petersburg area has a significant impact on shelter requirements of inland areas.

Finally, the SPLASH II computer analysis for the coastal counties of the Withlacoochee Region is used to estimate the at-risk population of coastal areas. This analysis provides estimates of coastal residents who will be required to evacuate from areas subject to storm surge.

Regional Hurricane Scenarios

Regional hurricane scenarios can be defined as hypothetical hurricane tracks with various intensities. Twelve regional hurricane scenarios have been identified by the Bureau of Disaster Preparedness.

Each of these scenarios simulates the three major tracks which a west coast hurricane would be most likely to take---striking the southwest coast, striking the Tampa Bay area, or

paralleling the coast. Each of these major tracks is further broken down by assuming worst case conditions for one of the counties. This produces the twelve regional hurricane scenarios.

For purposes of evacuation planning in this region, storm tracks striking the Tampa Bay area, and parallel tracks are most important. It is assumed that a hurricane striking the southwest coast of Florida will generate evacuees bound for shelters in the inland counties of the Southwest, Central Florida, and East Central Florida Planning Region. Therefore, only five of the 12 regional hurricane scenarios identified by the Bureau are important to the Withlacoochee Region. These are the scenarios for the four counties of the Tampa Bay region, and the scenarios for the parallel track storm. Table 2-11 presents these scenarios and table 2-10 defines the letter designated for each scenario as it relates to storm intensity.

Through this network of county scenarios, regional scenarios, as they relate to potential generated evacuees, can be identified. This matrix serves to provide decision-makers with a mechanism for assessing the impacts of hurricane tidal flooding and winds not only from a direct strike, but the effects of a storm that passes close by. This matrix however, is contingent upon a hurricane following a "typical" storm track as defined by the National Hurricane Center. Hurricanes usually are subject to erratic behavior, so any decision-making procedure must be flexible enough to account for storms not following a predictable path.

TABLE 2-10

COUNTY HURRICANE SCENARIOS

Scenario	Saffir/Simpson Category*
A	Category 1 or 2 storm
B	Category 2 or 3 storm
C	Category 3 or 4 storm
D	Category 4 storm
E	Category 5 storm

*Saffir/Simpson Hurricane Scale

Scale Number	Central Pressures Millibars	Central Pressures Inches	Winds (MPH)	Surge (FT.)	Damage
1	980	28.94	74- 95	4- 5	Minimal
2	965-979	28.5 -28.91	96-110	6- 8	Moderate
3	945-964	27.91-28.47	111-130	9-12	Extensive
4	920-944	27.17-27.88	131-155	13-18	Extreme
5	920	27.17	155+	18+	Catastrophic

TABLE 2-11

COMBINATION OF COUNTY SCENARIOS FORMING REGIONAL SCENARIOS

REGIONAL SCENARIO	COUNTY SCENARIO			
	Pinellas	Hillsborough	Pasco	Manatee
1 (Pasco Worst Case)	C	B	E	B
2 (Pinellas Worst Case)	E	D	D	C
3 (Hillsborough Worst Case)	D	E	C	D
4 (Manatee Worst Case)	A	C	A	E
5 (Parallel Track)	B	A	B	A

Source: Tampa Bay Regional Planning Council. Hurricane Evacuation Plan Technical Report, Table G-2, Appendix G. 1981.

The formulation of regional evacuation scenarios is useful in evacuation planning because it permits analysis of the evacuation activity in counties adjacent to the hardest hit county. Thus each county can be assigned a storm scenario indicating various degrees of severity all of which are less than or equal to the worst case. The five regional evacuation scenarios are listed and described in Appendix E.

NEED FOR SHELTER SERVICES IN THE WITHLACOOCHEE PLANNING REGION

To determine the public shelter demand for the Withlacoochee Region the three major components of inland shelter usage must be examined. These components are:

1. Tampa Bay Area Residents

   - Storm surge/salt water flooding evacuees
   - Freshwater flooding evacuees
   - Mobile home evacuees

2. Coastal Residents

   - Storm surge/salt water flooding evacuees
   - Freshwater flooding evacuees
   - Mobile home evacuees

3. Inland Residents

   - Freshwater flooding evacuees
   - Mobile home evacuees

Estimates of shelter-bound evacuees have been developed for each component. This provides a basis for determining shelter demand in the region. It also provides a basis for evaluating the adequacy of current shelter capacities in the study area.

Tampa Bay Area Residents

The three main corridors out of the Tampa Bay region into the Withlacoochee Region are shown in the table below. The Withlacoochee region can expect an influx of evacuees to enter Hernando County via Pasco County utilizing U.S. 41, U.S. 301, and I-75. This information was prepared by the Bureau of Disaster Preparedness based upon conversations with coastal county civil defense directors.

TABLE 2-12

SUMMARY OF HIGHWAYS
TO BE USED IN INTERREGIONAL EVACUATION

Withlacoochee Planning Region

Highway Number/Name	From	To
U.S. 41	Pasco County	Hernando County
U.S. 301	Pasco County	Hernando County
I-75	Pasco County	Hernando County

Regional traffic assignments were made by the Bureau based on the following assumptions:

1. That portions of a county's population evacuation on I-75 would remain on that route until they leave the region.
2. That evacuees using U.S. 41 would gravitate toward I-75 as they leave their respective counties.

The Bureau then estimated the number of coastal evacuees entering inland counties by evacuation scenario. This was accomplished in three steps:

1. Applying knowledge derived from the behavioral studies conducted for each hurricane evacuation study to estimate the percentage of coastal evacuees, who would leave the county or region.
2. Converting evacuation population into vehicle counts using regional specific vehicle occupancy rates.
3. Calculating traffic/population route assignments.

Each of these steps required a number of assumptions before calculations could be undertaken. These assumptions are identified in Appendix F.

The results of this analysis indicate that a minimum of 90,304 persons can be expected to enter the Withlacoochee Region under the assumption of a scenario 4 hurricane event. The greatest impact to the region is likely to result from a hurricane striking either Pinellas or Hillsborough County indicated as scenarios 2 and 3. These scenarios generate a evacuation influx of 143,510 persons and 141,304 persons respectively. This information is shown in table 2-13 by scenario and by transportation corridor.

TABLE 2-13

EVACUATION ROUTES OUT OF TAMPA BAY REGION
Into Withlacoochee Region
Vehicle/Person

Scenario	U.S. 41	U.S. 301	I-75	TOTAL
1	7855/20954	17947/38601	28371/60079	54173/119634
2	10774/29055	22158/47613	35184/66842	68116/143510
3	7820/20977	25789/53455	31247/66872	64856/141304
4	3936/9866	17667/36445	17883/43993	39486/90304
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
11	-	-	-	-
12	5816/13279	17887/38601	25690/53616	48763/105496

Source: Florida Department of Veteran and Community Affairs, Bureau of Disaster Preparedness, 1981.

Evacuees Desiring Shelter

Once regional evacuation routes and the resultant traffic impact on receiving regions were established, the Bureau of Disaster Preparedness determined the number of evacuees desiring shelter. The percentage of evacuees who would be shelter-bound was determined by behavioral study results in the Tampa Bay region. Table 3-17 through 3-21 delineate by regional scenario the evacuation population (by county) entering the Withlacoochee region. In the Tampa Bay study, respondents were asked what their destination would be if asked to evacuate; 37.9%± 1.4% named a Red Cross shelter; 25.8% ± 1.3% answered the home of a friend or relative; 18.8%± 1.1% said a hotel or motel; and 17.4% ± said they did not know. Of the population evacuating out of the Tampa Bay region, the following will be seeking shelter in interior counties: Pasco County, 49.5% Pinellas County, 33.8%; Hillsborough County, 38.6%; Manatee County, 34%. Thus, in order to determine the number of people desiring shelter in the Tampa Bay Region, the Bureau used the following formula:

TABLE 2-14

REGIONAL SCENARIO 1

	Pasco	Pinellas	Hillsborough	Manatee	Other Counties	Total
Total Evacuation Population	21706	115392	57514	23115	--	217727
Evacuation Pop. Entering Withlacoochee Region	21706	70419	27509	--	--	119634
No. of People Desiring Shelter	10744	23801	10618	--	--	45163
Evacuation Pop. Entering Central Florida Region	--	44973	30005	23115	--	980937
No. of People	--	15201	11582	7859	--	34642

TABLE 2-15

REGIONAL SCENARIO 2

	Pasco	Pinellas	Hillsborough	Manatee	Other Counties	Total
Total Evacuation Population	19790	153166	93784	28470	--	295207
Evacuation Pop. Entering Withlacoochee Region	19790	82476	41244	--	--	143510
No. of People Desiring Shelter	9796	27877	15920	--	--	53593
Evacuation Pop. Entering Central Florida Region	--	70690	52540	28470	--	151697
No. of People Desiring Shelter	--	23893	20280	9680	--	53853

TABLE 2-16

REGIONAL SCENARIO 3

	Pasco	Pinellas	Hillsborough	Manatee	Other Counties	Total
Total Evacuation Population	15086	149822	105273	30814	48418	349413
Evacuation Pop. Entering Withlacoochee Region	15986	79132	47086	--	--	141304
No. of People Desiring Shelter	7468	26747	18175	--	--	52390
Evacuation Pop. Entering Central Florida Region	--	70690	58187	39814	See. Next Table	208109
No. of People Desiring Shelter	--	23893	22460	10477	See Next Table	58830 (4 cnty only)

TABLE 2-16 (continued)

REGIONAL SCENARIO 3

	Sarasota	Charlotte	Lee	Collier	Glades & Hendry	Total
Pop. Subject to Evacuation	86196					86196
No. of People Leaving County (.34 of Row 1)	29511					29511
No. of People Desiring Shel. (.45) of Row 1)	39112					39112
No. of People Not Finding Shelter in County	18909					18909
Excess Capacity in Other Counties	0					0
Evac. Pop. Out of Region (Row 2 + 4 - 5)	48420					48420
Evacuees entering regions other than CFRPC and WRPC	0					0
TOTAL	48420					48420

Sources: 1. Table 14, Southwest Florida Regional Hurricane Evacuation Study
2. Table 4, Appendix D, Behavioral Survey Analysis
3. Tables 7 through 11, Appendix J, Shelter Needs, Shelter Assignments

TABLE 2-17

REGIONAL SCENARIO 4

	Pasco	Pinellas	Hillsborough	Manatee	Other Counties	Total
Total Evacuation Population	12646	86100	61101	34256	86278	230381
Evacuation Pop. Entering Withlacoochee Region	12646	49771	28877	--	--	90304
No. of People Desiring Shelter	6260	16823	11147	--	--	34230
Evacuation Pop. Entering Central Florida Region	--	36329	33214	34256	See	190077
No. of People Desiring Shelter	--	12279	12820	11647	See Next Table	36746 (4 cnty only)

TABLE 2-18

REGIONAL SCENARIO 12

	Pasco	Pinellas	Hillsborough	Manatee	Other Counties	Total
Total Evacuation Population	15028	100071	55884	20975	See Next Table	460568
Evacuation Pop. Entering Withlacoochee Region	15028	62959	27509	--	--	131186
No. of People Desiring Shelter	7439	21280	10618	--	--	39337
Evacuation Pop. Entering Central Florida Region	--	37762	28375	20975	See Next Table	355112
No. of People Desiring Shelter	--	12673	10953	7132	See Next Table	30758 (4 cnty only)

Total County Evacuation Population	x	Corresponding County % of Populating Desiring Shelter	=	Number of People Desiring Shelter

Under a Regional Scenario 1, for instance, 21,706 people in Pasco County would evacuate to the Withlacoochee region. The number of these evacuees desiring shelter was derived by the following calculation:

$$21,706 \times 49.5\% = 10,744.47$$

Thus, 10,745 evacuees leaving Pasco County would desire shelter in the Withlacoochee planning region. Under that Regional Scenario, a total of 119,634 evacuees from Pasco, Pinellas, and Hillsborough Counties would enter the Withlacoochee region. Of this population, 45,163 would desire shelter.

Table 2-19 is a summary of this information as it relates specifically to the Withlacoochee region. Regional Scenario #2 triggers the greatest number of evacuees entering the Withlacoochee Region via the three major routes (US 41, US 301 and I-75). Approximately 53,593 people desiring shelter are expected to travel these three routes under Regional Scenario 2.

TABLE 2-19

Evacuees Desiring Shelter From Tampa Bay Region

Tampa Area Regional Scenario	Total Evacuation Population	Evacuation Population Entering Withlacoochee Region*	No. of People Desiring Shelter
1.	217,727	119,634	45,163
2.	295,207	143,510	53,593
3.	349,413	141,304	52,390
4.	230,381	90,304	34,230
12.	460,468	131,186	39,337

Source: Florida Department of Veteran and Community Affairs, Bureau of Disaster Preparedness. Coastal County Demand for Inland Shelters from Tampa Bay and Southwest Florida Planning Regions.

*The total number of people evacuating into Withlacoochee Region regardless of destination (e.g. public shelter, hotel-motel, or friend or relative).

Coastal Residents

The at-risk coastal residents of the Withlacoochee region is estimated for the worst probable hurricane event for Citrus, Levy and Hernando Counties. This estimate is derived from the SPLASH II computer run, 1980 census data, and the behavioral survey. This analysis focuses on the more highly populated areas of the coastal counties. The shelter-bound population from the coastal counties is shown in table 2-20.

Inland Residents

Resident population of inland counties bound for public shelters is shown in table 2-20. The at-risk population in Marion and Sumter Counties is estimated from flood information and mobile home population figures.

Since a behavioral survey was conducted as part of the Tampa Bay Hurricane Evacuation Plan, it is possible to use the results of that analysis to make assumptions of the behavioral characteristics of the inland population. Using the Tampa Bay data, it is assumed that 38 percent of the evacuation population will require public shelter.

Shelter Usage

Table 2-20 indicates that the greatest sheltering needs will occur as a result of a hurricane striking the Tampa Bay region. The worst probable scenario for Hillsborough County will generate about 52,390 evacuees requiring shelter in the Withlacoochee region. A storm paralleling the Tampa Bay area will also generate a significant evacuation with about 39,331 persons requiring shelter.

A direct hit on the coastal areas of Levy, Citrus, or Hernando Counties will not generate a similar large evacuation simply because of the relatively low population levels in those counties.

TABLE 2-20

ESTIMATED SHELTER-BOUND POPULATION
BY REGIONAL SCENARIO

Regional Scenario	Inland Area Residents of Withlacoochee Region Requiring Public Shelter	Threatened Coastal Residents of Withlacoochee Region Requiring Public Shelter	Tampa Bay Area Residents Requiring Public Shelter in Withlacoochee Region	Total Estimated Shelter Usage
Worst Probable Pasco Co.	-	-	45,163	45,163
Worst Probable Pinellas Co.	-	-	53,593	53,593
Worst Probable Hillsborough Co.	-	-	52,390	52.390
Worst Probable Manatee Co.	-	-	34,230	34.230
Paralleling Tampa Bay Area	-	-	39,337	39,337
Worst Probable Levy Co.*	27,841	6,274	-	34,115
Worst Probable Citrus Co.*	27,841	15,557	-	43,398
Worst Probable Hernando Co.*	27,841	10,761	-	38,602

*County Scenario only. Assumes 38% of at risk population desires public shelter.

Source: WRPC staff analysis, April, 1982.
Department of Veteran and Community Affairs, Bureau of Disaster Preparedness.

CHAPTER III

BEHAVIORAL DATA

Scope of Study

An essential type of data that must be examined when attempting to quantify public shelter requirements is the human factor of hurricane response. The tendencies and choices of potential evacuees in the following types of response must be quantified:

- when the threatened population would leave their residences in relation to a given evacuation order
- the number of vehicles that the threatened household would utilize for evacuation
- the number of threatened households that would require transportation or other assistance if ordered to evacuate
- the pre-planned destinations of the potentially threatened population
- the general hurricane experience of the potentially threatened population

The quantification of the above types of response is also valuable in planning evacuation times, planning emergency mass transportation of those evacuees without private means of transportation, and planning an effective public information/ hazard awareness program.

In order to quantify such potential types of hurricane response by vulnerable residents of the Withlacoochee Region, WRPC employed the firm of H. W. Lochner, Inc. to conduct a statistically signficant survey of their tendencies. The survey took the form of about 1,000 telephone interviews of residents at-risk from hurricane hazards. In the three coastal counties about 500 residents living within the worst probable storm surge zone were surveyed. In Marion and Sumter Counties 500 residents subject to wind hazards were surveyed. Since the inland counties are not subject to the hurricane surge, the sampling frame for inland residents was limited to the residents of mobile homes. A description of the methodology used to survey the residents' tendencies is provided in Appendix G.

Summary of Responses

The findings of the survey pertaining to the inland counties are summarized in table 3-1. The incorporation of the survey findings in the overall plan appears in Chapters II and IV.

Analysis of Results

For purposes of determining shelter requirements, the results of the questions on destination are signficant. The survey indicated that about 40.0 percent of the respondents will require shelter, with about 25.7 percent not knowing their destination.

The remaining evacuees would go to a hotel/motel or friend. For planning purposes the "don't know" and "shelter" responses are added together. This procedure would mean that about two-thirds (40.0% plus 25.6%) of the population-at-risk would have to be sheltered. This poses a problem of potentially excessive demand on shelters.

Most civil defense professionals would question whether such a large population would actually use shelters, as whether it would be feasible to provide such space. Also, based upon monitoring of selected interviews and further discussions with the professional interviewers, the strong impression of the consultant is that many inland mobile home residents have never thought about evacuating. In other words, the interviewers caught these respondents by surprise. Given a few hours, many of the "shelter" and "don't know" respondents would probably make non-shelter arrangements.

Conversely, many retired mobile home residents:

1. Do not have an extended family in Florida,

2. Are friends mainly with their immediate neighbors who are facing the identical hazard and, therefore, can not offer any better refuge,

3. Are handicapped.

Some of the more progressive operators of mobile home parks have established evacuation shelter plans within on-site clubhouses and similar facilities. The overall public advantages to such an approach are incalculable. For example:

TABLE 3-1

INLAND COUNTY RESIDENTS' TENDENCIES

	Withlacoochee Inland Residents
EVACUATION RESPONSE	
Immediate	85.6% ± 3.1%
Certain Number of Hours	12.6% ± 2.9%
Never	1.8% ± 1.2%
Average Number of the Certain number of hours[1/]	1.77
VEHICULAR USAGE	71.7%
NEED FOR TRANSPORTATION	3.6% ± 1.6%
NEED FOR SPECIAL HELP	6.1% ± 2.1%
DESTINATION	
Public Shelter	40.0% ± 4.3%
Friend or Relative	13.7% ± 3.0%
Hotel or Motel	20.6% ± 3.6%
Don't Know	25.7% ± 3.0%
PERCEPTION OF THREAT	
Yes	21.8% ± 3.6%
No	59.4% ± 4.3%
Maybe	18.8% ± 3.4%

Source: H. W. Lochner, Inc. Behavioral Survey for the Withlacoochee Regional Disaster Preparedness Plan. June, 1982.

1/ The hourly range breakdown for evacuation response was as follows:

Hourly Range	Withlacoochee Inland Residents
Less than 2	64.1%
2 or More, but Less than 3	29.5%
3 or More, but Less Than 4	3.8%
4 or More	2.6%

1. A significant number of vehicles would not be on the public roadways.

2. A significant number of elderly drivers would not be driving in hazardous conditions.

3. Communities of social support would remain intact.

Several surveyees, however, indicated that they planned to go to facilities that might appear safe, but are quite dangerous. Although most people understand the hazards of large glass areas, most people do not realize the dangers of the long span roofs of many auditorium-type facilities.

In sum, the potentially excessive demand on shelters can be modified by two basic approaches:

1. Early educational programs strongly urging residents to consider the evacuation possibility and to make private arrangements. In Pinellas County, for example, the Red Cross openly advises people that shelters offer considerably less than desirable living conditions.

2. Encouragement and possible requirements of existing and proposed mobile home parks (especially the larger ones) to have hurricane plans and/or shelters. These activities could be used as valid support to modify the behavioral survey results.

The major conditions that can be drawn from the behavioral study are listed below.

1. The vast majority of the households (98.2 percent of the inland residents) would respond either immediately or rather promptly to an evacuation order.

2. Significant proportions of the available vehicles (28.3 percent of the inland vehicles) would not be used during the evacuation thereby helping to reduce the traffic problem.

3. While the needs for general (bus or taxi) transportation service and specialized transportation (handicapped) service are a small percentage, these demands could become a logistical problem involving thousands of persons within an already strained situation. The general transportation problem can resolve itself through increased education, citizen cooperation and advanced private arrangements.

4. The indicated shelter space needs for the inland mobile home residents exceed 65 percent of the sample population. This figure is most likely excessive. The typical inland resident of a mobile home simply has not considered evacuating and needs to be educated. Also, measures to provide shelters within large mobile home parks, such as in clubhouses, should be vigorously pursued.

5. A clear minority of the population has experienced the direct hit of a hurricane and many respondents have a misconception that they have had such an experience.

6. Under the "perception of threat" category in table 3-1 it can be seen that twenty-two percent of the respondents think that their mobile home is safe in a hurricane. A clear educational challenge for public officials is indicated in those results.

A sample of the form used to conduct the behavioral survey is shown in Appendix I.

CHAPTER IV

SHELTER REQUIREMENTS

This chapter will describe the need for additional shelter facilities in the region. Potential additional shelter facilities will be reviewed for consideration as officially designated public shelters and the pre-requisites for official shelter designation will be discussed. The tables discussed in the narrative are grouped in sequence following the narrative for ease of reading and cross reference.

Estimate of Additional Shelters Needed

A review of the sheltering capacity available at designated primary shelter facilities reveals that a shortfall exists between the number of spaces available and the number of spaces needed. This shortfall is most dramatic under the storm evacuation scenarios for the Tampa Bay Region. It appears that the worst case in terms of shelter need for the Withlacoochee Region occurs as the result of a hurricane in the Tampa Bay Planning Region. This being the case, it is necessary to expand the inventory of usable shelters to accommodate shelter bound evacuees from the Tampa Bay region.

Table 4-1 compares the primary shelter capacity of the inland counties with the estimated number of persons requiring shelter from the Tampa Region. As indicated in Chapter II, the current designated shelter space in Marion County amounts to 29,329 with 6,407 available spaces in Sumter County. The combined primary shelter capacity for the inland counties is 35,736 spaces. Table 4-2 shows the shortfalls in shelter capacity for each regional scenario. Scenario 2 shows the most dramatic shortfall of 65,993 spaces for evacuees. This comparison provides a goal or target for provision of additional shelters. It should be noted however, that a portion of the shelter bound evacuees entering the Withlacoochee region will pass through and seek shelter beyond the region.

Description of Additional Shelter Facilities

Sumter County

Listed in table 4-3 are potential additional shelter facilities in Sumter County. Presently schools are designated as primary shelters with the principals responsible as shelter managers. Since there are no operational Red Cross units in the county, the Civil Defense Department along with the school principals operate the shelters.

To expand the public shelter space in the County it will be necessary to expand the capabilities for shelter management. Also, further inspection of shelter characteristics and structural suitability will be required. The potential additional shelter sites for Sumter County consists of churches, meeting halls and community centers. This listing must be considered preliminary because further investigation in the form of a shelter feasibility analysis will be necessary to determine which facilities are appropriate public shelters. The analysis should include a review of the site location, structural integrity, amenities present and emergency staffing (if any).

Motels and hotels are a preferred destination for many evacuees and tend to fill up quickly when a hurricane watch is announced. Table 4-4 summarizes the motel room units in Sumter County. The 538 motel units in Sumter County amounts to space for about 2,098 people.* By applying the motel vacancy rate for the region during hurricane season we can estimate the available capacity in the motels during this time period. This calculation indicates that vacancies sufficient to accommodate 780 persons exists in Sumter County during the hurricane season. This is an average figure based upon the overall vacancy rate for hurricane season. The motel vacancy rates are subject to constant change.

Marion County

Potential additional shelter sites in Marion County include churches, meeting halls and other public oriented buildings. These structures are listed in table 4-5.

Table 4-6 lists the hotels and motels in Marion County, having a total of 2,927 units. This is equivalent to space for about 11,412 people. By applying the motel vacancy rate for Marion County during hurricane season to the total number of units we can estimate the number of vacant units. This calculation indicates that space for about 4,462 people is available for evacuees in Marion County hotels/motels during hurricane season.

Sheltering for Coastal versus Inland Evacuees

Depending on the nature of the storm track, it may be necessary to open shelters in the inland counties for coastal evacuees prior to the evacuation of inland residents.

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*Assuming that 95% of the motel rooms have space for four people and the remaining 5% have room for two people.

However, shelter space for inland residents who evacuate at a later time will need to be reserved. This may best be accomplished by opening certain shelters upon the coastal evacuation order and opening the remaining shelters when the inland residents are ordered to evacuate. The identification of specific shelters to be used by inland versus coastal evacuees can be completed upon further expansion of designated shelter space. To implement this aspect of shelter assignment strong coordination among civil defense officials and county government officials will be necessary.

Summary

Table 4-7 is a summary of the primary shelter space, potential shelter space, the hotel/motel space in the inland counties of the Withlacoochee Region. Of course not all of the potential shelter sites will become available, many will be unsuitable for reasons of location, building characterists, and other factors.

Based upon this very preliminary count of designated and potential space availability (a total of 81,494 spaces not including hotel/motels), it appears that sufficient sheltering would be available to Tampa Bay evacuees seeking shelter in the Withlacoochee Region.

This is true only when inland county residents of the Withlacoochee Region do not need public shelter. If hurricane hazards are sufficient to trigger evacuation of inland county mobile home residents, then shelter space will not be sufficient to accommodate all shelter-bound Tampa Bay evacuees. A portion of the coastal evacuees will have to pass through the Withlacoochee Region to other areas.

TABLE 4-1

SHELTER REQUIREMENTS
Withlacoochee Inland Region

Regional Scenario**	Inland Counties Primary Shelter Capacity (20 sq. ft./person)	Shelter Bound Evacuees Entering the Withlacoochee Region From the Tampa Region	Inland County Residents Requiring Public Shelter*	Estimated Shelter Requirements
1	35,736	45,163	48,136	93,299
2	35,736	53,593	48,136	101,729
3	35,736	52,390	48,136	100,526
4	35,736	34,230	48,136	82,366
12	35,736	39,337	48,136	87,473

*Assumes that wind and freshwater flooding hazards will require evacuation of at-risk inland residents. It is also assumed that 65.7% of the inland at-risk population will seek public shelter. The behavioral survey for the inland counties indicated that 40.0% of the at-risk population would seek shelter and that 25.7% "don't know" their destination. For planning purposes it is assumed that persons not knowing their destination will seek public shelter.

**Regional Scenarios represent the worst probable storm event for each county in the Tampa Bay Region based upon the SLOSH hurricane simulation. Scenarios 1, 2, 3 and 4 are storm tracks striking the coast, with scenario 12 representing conditions created by a paralleling storm. Regional Scenarios are fully described in Appendix E.

TABLE 4-2

Inland Counties - Shortfall in Shelter Capacity

Regional Scenario	Inland Counties Primary Shelter Capacity (20 sq. ft./person)	Estimated Shelter Requirements	Shortfall in Shelter Capacity
1	35,736	93,299	57,563
2	35,736	101,729	65,993
3	35,736	100,526	64,790
4	35,736	82,366	46,630
12	35,736	87,473	51,737

TABLE 4-3

SUMTER COUNTY POTENTIAL SHELTER SITES

Name of Structure	Address	Capacity (20 sq ft/person)
Moose Lodge	SR 470 Lake Panasoffkee	296
First Baptist Church	SR 470 Lake Panasoffkee	220
First Assembly of God	SR 470 Lake Panasoffkee	118
Church of Christ	Hwy. 301 Sumterville	28
First Baptist Church	Hwy. 301 Sumterville	106
United Methodist Church	Jones Road Sumterville	62
St. Francis Episcopal	601 Grey St. Bushnell	72
Bushnell United Methodist	500 Hopkins St. Bushnell	158
Bushnell Recreation Hall	W. Noble Ave. Bushnell	126
Church of God	E. Central Ave. Bushnell	170
Church of God	N. York Street Bushnell	272
Community Center	Virginia Ave. Center Hill	126
Freewill Baptist Church	Virginia Ave. Center Hill	38

TABLE 4-3 (cont.)

First Baptist Church	Virginia Ave. Center Hill	210
Center Hill Presbyterian	Virginia Ave. Center Hill	138
Webster City Club	S. E. 1st Ave. Webster	88
First Baptist Church	N. W. 5th St. Webster	126
United Methodist Church	S. E. 3rd St. Webster	174
Webster Baptist Church Bldg 1 and 2	1st Ave. Webster	350
Mt. Olive Church	N. W. 10th Ave. Webster	88
Pleasant Grove Baptist Church	S. R. 44 Wildwood	172
American Legion Post 8	S.R. 44 Wildwood	84
Trinity Baptist Church	S. R. 468 Coleman	140
Church of Christ	Shady Lane Oxford	76
Assembly of God Bldg 1 and 2	Hwy. 301 Oxford	182
United Methodist Church of Oxford	Creek Road Oxford	132
First Baptist Church Bldg 1 and 2	Creek Road Oxford	264

TABLE 4-3 (Cont.)

AME Church	S. R. 44A Wildwood	136
Wildwood Methodist Church Bldg 1 and 2	Mason Avenue Wildwood	290
Church of Christ Bldg 1 and 2	Gamble Ave. Wildwood	236
First Baptist Church Bldg 1 through 4	Oxford St. Wildwood	1254
Great Piney Baptist Church	Huey Ave. Wildwood	172
Amtrak Passenger Station	601 N. Main St. Wildwood	364
Baptist Church, Bldg 2	Huey Ave. Wildwood	62
Sumter County Total Potential Additional Shelter Capacity		6,530

Source: F.E.M.A., CPP Host Area Facility Listing, March 1981.

TABLE 4-4

SUMTER COUNTY HOTELS/MOTELS

Name of Structure	Number of Units	Meeting Room	Restaurant
Best Western Guest House Motel	47	yes	yes
Days Inn America, Inc.	190	yes	yes
Days Inn (Sunshine Inn)	120	no	yes

TABLE 4-4 (cont.)

Holiday Inn	136	--	--
United 500 Motel	45	no	yes

TOTAL HOTEL/MOTEL UNITS, SUMTER COUNTY: 538

Source: Sumter County Chamber of Commerce, June, 1982.

TABLE 4-5

MARION COUNTY POTENTIAL SHELTER SITES

Name of Structure	Address	Capacity (20 sq. ft./person)
Masonic Temple	5871 N. Baseline Road, Belleview	194
Ramah Baptist Church	N. Hwy. C-35 Belleview	90
Summerfield First Baptist Church Bldg. A, B	Church St. Summerfield	290
Pedro Baptist Church Bldg. 1 and 2	FL. Hwy. 42 Pedro	222
Shady Grove Baptist Church Bldg. 1 and 2		294
First Baptist Church	N. U.S. 441A Oklawaha	114
United Methodist Church	N. Hwy. US Alt. 441	226
Community Center	N. Hwy. US Alt. 441 Oklawaha	116
United Christian Church	W. Belleview Chandler Hwy., Chandler	120

Table 4-5 (Continued)

St. Paul Baptist Church	S. Hwy. S-464 Chandler	110
Weirsdale Presbyterian Church Bldgs. 1-3	W. Hwy. US Alt. 441 Weirsdale	482
First Baptist Church Bldg. 1 and 2	W. Hwy. US Alt. 441 Weirsdale	248
East Lake Weir Baptist	W. of Hwy. 441	84
St. John Lutheran Church	S. Sunset Harbor Sunset Harbor	86
Church	N. County Rd. 8 Sunset Harbor	62
Calvary Baptist Church	Brook Rd. Ocala	58
Community Center	525 Silver Road Ocala	324
Presbyterian Church	674 Silver Rd. Ocala	136
First Baptist Church Bldg. 1, 2, 3, 4	S.E. Agrew Rd. Belleview	952
Church of the Nazarene	5930 S.E. Robinson Rd., Belleview	202
Moose Lodge No. 1014	N. Hwy. 441 Belleview	214
American Legion Hall	5528 SE 109th St. Belleview	122
Kingdom Hall	11126 S.E. 62nd Ave. Belleview	102
Pentecostal Church	6337 S.E. Babb Rd. Belleview	166
Belleview Church of God	S.E. Robinson Rd. Belleview	98
St. Theresa's Roman Catholic Church	S. US Hwy. 301 Belleview	150
St. Paul Catholic Church	5309 SE Pulaski St. Belleview	62

TABLE 4-5 (Cont.)

Pentecostal Church	Hwy. 484 Dunnellon	148
Assembly of God	US Hwy. 41 Dunnellon	102
First Bethel Baptist Church, Bldg. 1 and 2	N. Hwy. 41 Dunnellon	204
Mt. Olive Church	Summit Ave. Dunnellon	216
American Legion 58	N. US Hwy. 41 Dunnellon	170
Pres. Fellowship Center	110 Chestnut Ave. Dunnellon	102
Masonic Temple	106 W. Penn Ave. Dunnellon	62
Holy Faith Church	Blue Core Dr. Dunnellon	212
First United Methodist Church	Chestnut St. Dunnellon	408
First Christian Church	Cedar Street Dunnellon	204
Dunnellon Presbyterian Church	Ohio Street Dunnellon	124
Cedar Creek Baptist Church	N. Hwy. 314 Silver Springs	106
Cedar Creek Baptist Church Classrooms	N. Hwy. 314 Silver Springs	114
First Baptist Church	N. Hwy. 314 Silver Springs	62
Ft. McCoy Methodist Church	Hwy. 316 Ft. McCoy	74
Ft. McCoy First Baptist Church	Hwy. 316 Ft. McCoy	270
Oak Grove Baptist Church	Lisk Ave. Ft. McCoy	140

Table 4-5 (Cont.)

St. Mary's Baptist Church	N.E. 55th St. Silver Springs	90
Anthony Baptist Church	Olive Ave. Anthony	298
Anthony Church of Christ	Hwy. 200A Anthony	78
Anthony United Methodist Bldg. 1 and 2	Burbank Rd. Anthony	338
Mt. Olive AME Church	Kingsland Ave. Anthony	76
Orange Springs Community Church, Bldg. 1 and 2	Hwy. C-315 Orange Springs	170
Oak Grinder Baptist Church Bldg 1 and 2	6422 Jacksonville Rd. Oak	1282
Pentecostal United Church Bldg. 1-6	Hwy. 25A Kendrick	1324
Community Bible Church	N. Hwy. 441 Ocala	150
First Presbyterian Church Education Bldg.	511 S.E. 3rd St. Ocala	434
United Methodist Church	1126 E. Silver Springs Blvd., Ocala	456
Blessed Trinity Church	211 S.E. 17th St. Ocala	874
First Baptist Church Classrooms	603 S.E. 3rd St. Ocala	644
Apostle Faith Church	731 N.W. 16th Ave. Ocala	78
Welcome Stranger Baptist Church	790 N.W. 9th Ave. Ocala	160
St. Pauls AME Church	822 N.W. 7th St. Ocala	424
Church of God	605 N.W. 8th St. Ocala	88
New Zion Baptist Church	790 N.W. 6th Ave. Ocala	140

TABLE 4-5 (Cont.)

Central Christian Church Bldg. 1, 2, 3	3010 N.E. 14th St. Ocala	506
Covenant Baptist Church	602 S.W. Broadway St. Ocala	316
First Church of the Nazarene	3732 N.E. 7th St. Ocala	512
Ocala Scottish Rite Temple	3672 N.E. 7th St. Ocala	454
Ft. King Presbyterian Bldg. 1 and 2	11 N.E. 36th Ave. Ocala	330
Liberty Temple Church	232 N.W. 9th St. Ocala	160
Church of God	2006 N.E. 8th Rd. Ocala	408
Mt. Moriah Baptist Church	55 S.W. 3rd Ave. Ocala	226
Central Church of Christ	2967 N.E. Silver Springs Blvd., Ocala	170
Temple Baptist Church Bldg. 1 and 2	2580 N.E. 10th St. Ocala	394
St. Matthrews Lutheran Church	3253 N.E. Silver Springs Blvd., Ocala	234
Church of Christ	537 N.E. 8th Ave. Ocala	56
Ft. King Baptist Church	911 N.E. 8th Ave. Ocala	154
Pentecostal Church	1109 N.E. 11th St. Ocala	74
Church of Prophecy	2006 N.E. 8th Ave. Ocala	82
Faith Prim. Church Bldg. 1 and 2	2106 N.W. 1st Ave. Ocala	182
St. Johns Lutheran Church Bldg. 1 and 2	1915 S.E. Lake Weir Rd., Ocala	2032

TABLE 4-5 (Cont.)

First Alliance Church	1918 S.E. 17th St. Ocala	180
Bible Baptist Church	3401 S.E. Lake Weir Rd., Ocala	204
Church of Christ Bldg. A and B	2750 S.E. Maricamp Rd. Ocala	580
First Presbyterian Church including school bldg.	511 S.E. 3rd St. Ocala	850
St. Marks Methodist Church	1839 N.E. 8th Rd. Ocala	330
First Freewill Baptist Church	2100 N.E. 24th St. Ocala	130
Northside Missionary Baptist Church	2321 N.E. 11th St. Ocala	210
Oakcrest Baptist Church Bldg. 1 and 2	1108 N.E. 28th St. Ocala	476
First Assembly of God Bldg. 1 and 2	1827 N.E. 14th St. Ocala	474
Pentecostal Church Bldg. 1 and 2	205 S.E. 19th St. Ocala	142
Druid Hills Methodist	1712 S.E. Lake Ave. Ocala	220
St. Paul Baptist Church	3850 S.E. Maricamp Rd., Ocala	96
Faith Presbyterian Church	600 S.E. Baseline Ave., Ocala	172
Mt. Canaan Baptist Church	1000 Baseline Rd. Ocala	88
St. Paul United Methodist Church	4060 S.E. 8th St. Ocala	188
Highlands Baptist Church Bldg. 1, 2, 3, 4	3530 S.E. Ft. King Ave., Ocala	1990
Central Baptist Church Bldgs. 1, 2, 3, 4	1714 S.E. 36th Ave. Ocala	2276
First Christian Church Bldg. 1 and 2	1908 S.E. Ft. King Ave., Ocala	436

TABLE 4-5 (Cont.)

United Methodist Church Bldgs. 1, 2, 3, 4	1126 E. Silver Sppgs. Blvd., Ocala	1362
Elks Club	2449 N.E. Silver Springs, Ocala	476
Canaan Baptist Church Bldg. A	St. Hwy. 318 Flemington	122
Grtr. New Bthl. MB Ch.	St. Hwy. 329 Flemington	194
Recreation Center	St. Hwy. 329 Flemington	142
Flemington Baptist Church	St. Hwy. 329 Flemington	292
Church of Jesus Christ	--- Sparr	76
Simmons Baptist Church	Hwy. 318 Citra	94
Fairfield Presbyterian Church	St. Hwy. 225 Fairfield	166
Mt. Olive AME Church	Evinston Rd. Evinston, FL	154
Zion Bethel Baptist Church	US Hwy. 301	130
McIntosh Presbyterian Church	"D" Street McIntosh	102
McIntosh United Methodist Church, Bldg. A and B	"H" Street McIntosh	134
McIntosh Baptist Church	US Hwy. 441 McIntosh	148
United Methodist Church	St. Hwy. 25A Reddick	312
Church of God	St. Hwy. 25A Reddick	174
Reddick Railroad Depot	Railroad Ave. Reddick	308
United Baptist Church	St. Hwy. 25A Reddick	266

TABLE 4-5 (Cont.)

Mt. Zion United Methodist Bldg. A and B	St. Hwy. 316 Reddick	274
Fellowship Baptist Church Bldg. A and B	US 27 and SR 464 Fellowship	376
Fellowship Lodge	US 27 and SR 464 Fellowship	114
Church of Christ	3900 SW Pine Ave. Ocala	138
Olivet Baptist Church	8495 S. Magnolia Ave. Ocala	342
Mt. Calvary Baptist Church	SR 200 Ocala	110
Calvary Baptist Church	2701 S.E. 73rd St. Ocala	118
United Methodist Church	2325 S.E. 73rd St. Ocala	124
S. Ocala Baptist Church Bldg. 1 and 2	2709 S.E. 42nd St. Ocala	222
First Church of God	3140 S.W. 26th St. Ocala	544
Zion United Methodist Church, Bldg. 1 and 2	600 N.W. 16th Ave. Ocala	222
Ocala/City Owned Buildings		
Lincoln St. Youth Center	1710 N.W. 10th St.	146
City Auditorium		338
Municipal Airport Passenger Terminal		30
City Hall		26
Electric Utilities Main Building		8
Golf Course #1 Clubhouse		71

TABLE 4-5 (Cont.)

Library	259
War Memorial Auditorium	262
Marion County Potential Shelter Sites: Total Spaces	39,622

Source: FEMA, CRP Host Area Facility Listing, March 1981.

TABLE 4-6

MARION COUNTY HOTELS/MOTELS

OCALA

Name of Structure	Number of Units	Meeting Room	Restaurant
Alamo Motel	26	No	No
Aloha Court	14	No	No
Boulevard Motel	14	No	No
Bridges Motel	14	No	No
Cloister Court	17	No	No
Coral Motel	12	No	No
Craft Motel	23	No	No
Cross Country Motor Lodge	7	No	No
Davis Bros. Motor Lodge	96	No	Yes
Days Inn Motel	140	No	Yes
Dement Motel	21	No	No
Dixie Motel	15	No	No
Econo-Lodge	100	No	Yes
Egret Motel	42	No	No
Family Inn Economy Motel	41	No	Yes
Fairways Motel	26	No	No
Flamingo Motel	23	No	No
French Court Motel	23	No	No
Friendly Village Inn	144	No	Yes
Golden Spur Motel	19	No	No
Hilltop Motel	13	No	No
Holiday Inn West	196	Yes	Yes
Holiday Motel	32	No	No
Hornes Motor Inn	100	No	Yes
Howard Johnson's	64	No	Yes
International Motel	20	No	No
Johnson's Motor Lodge	51	No	No
Journey's End Motel	25	No	No
Kazimra Motel	6	No	No
Magnolia Court	15	No	No
Mustang Motor Inn	60	No	No
Ocala Motel	14	No	No
Orange Blossom Motel	10	No	No
Palms Motel	22	No	No
Pan American Motel	20	No	No
Panorama Resort Inn	100	Yes	Yes
Quality Inn	121	Yes	Yes

TABLE 4-6 (Cont.)

Ramada Inn	138	Yes	Yes
Red Carpet Inn	108	Yes	No
Scottish Inn	52	No	No
Shamrock Motel	12	No	No
Shangri La Motel	26	No	No
Shel-lyn Motel	12	No	No
Sheraton Motor Inn	100	Yes	Yes
Silver Princess Motel	25	No	No
Silver Springs Budget Motel	30	No	No
Silver Sands Motel	12	No	No
Southern Hotel Motor Lodge	39	No	No
Southland Motel	12	No	No
Southwood Motel	42	No	No
Spring Side Motel	28	No	No
Stage Stop Inn	75	No	Yes
Star Motel	13	No	No
Steven's Motel	16	No	No
Sun Days Motel	11	No	No
Sun Plaza Inn	48	No	No
Thunderbird Motel	48	No	No
Town and Country Quality Inn	125	Yes	Yes
Town Plaza Motel	14	No	No
Travelodge of Ocala	70	No	Yes
Tropical Court	16	No	No
Western Motel	23	No	No
BELLEVIEW			
Silver Belle Motel	14	No	No
VIN-MAR Motel	10	No	No
DUNNELLON			
Angler's Resort	9	No	No
Bass Galore Village	10	No	No
Davis Court	15	No	No
Dinner Bell Motel	16	No	Yes
Fish n' Fun Lodge	6	No	No
Lucky Landing Fish Resort	7	No	No
FT. MCCOY			
Ponderosa Motel	4	No	No

TABLE 4-6 (Cont.)

ORANGE LAKE			
Orange Lake Fishing Camp	10	No	No
Orange Lake Court	12	No	No
Pine Grove Cottages	9	No	No
Ranch Motel	14	No	No
CITRA			
Orange Blossom Motel	10	No	No

TOTAL HOTEL/MOTEL UNITS, MARION COUNTY: 2,927

Source: Ocala/Marion County Chamber of Commerce, May, 1982.

Table 4-7

Shelter Capacity Summary (20 sq. ft./person)

	Primary Shelter Space	Potential Shelter Space	Hotel/Motel Space (Vacant capacity)	Total Capacity
Marion County	29,329	39,228	4,462	73,019
Sumter County	6,407	6,530	780	13,717
	35,736	45,758	5,242	86,736

CHAPTER V

EVACUATION ROUTES

Routing from Vulnerable Inland Areas to Shelter Facilities

Residents susceptible to inland hurricane hazards are not concentrated in certain areas, rather, they are evenly distributed over the two county area. Numerous routes will be utilized in the course of an evacuation and it is difficult to identify certain routes to be used in the evacuation. Perhaps the most important factor in the inland evacuation is the identification and avoidance of roadways inundated by flooding. Accordingly, the evacuation order should arrive early enough to allow complete clearance prior to the onset of roadway flooding.

Routing of Coastal Evacuees to Inland Shelters

The greatest coastal demand for inland public shelter is from an evacuation of the Tampa Bay Region. Since shelters are generally opened on a "as-needed" basis, this report will consider routing procedures as they apply to the worst probable hurricane event. Storm events of lesser intensity will require fewer shelter openings and fewer evacuation routes.

The Bureau of Disaster Preparedness has provided an indication of the expected demand for shelter facilities from the Tampa Bay Region. The three major routes that have been identified are: U.S. 41; U.S. 301; and Interstate 75. This analysis will focus on U.S. 301 and Interstate 75. Shelter assignment of evacuees on U.S. 41 is covered in the Hurricane Evacuation Plan for Levy, Citrus and Hernando counties. A total of 20,429 coastal evacuees could be accommodated in these counties. This will provide sufficient shelter space for the expected Tampa area coastal demand on U. S. 41 (This information is presented in Appendix J.) It is assumed that the Rt. 19 will not be utilized as an evacuation route because of its location in the surge area. Tables 5-1 and 5-2 describe the access routes to the shelters from the major evacuation routes. Maps 1 through 5 are location maps of the designated primary shelters in the region.

TABLE 5-1

SUMTER COUNTY EVACUATION ROUTES TO SHELTERS

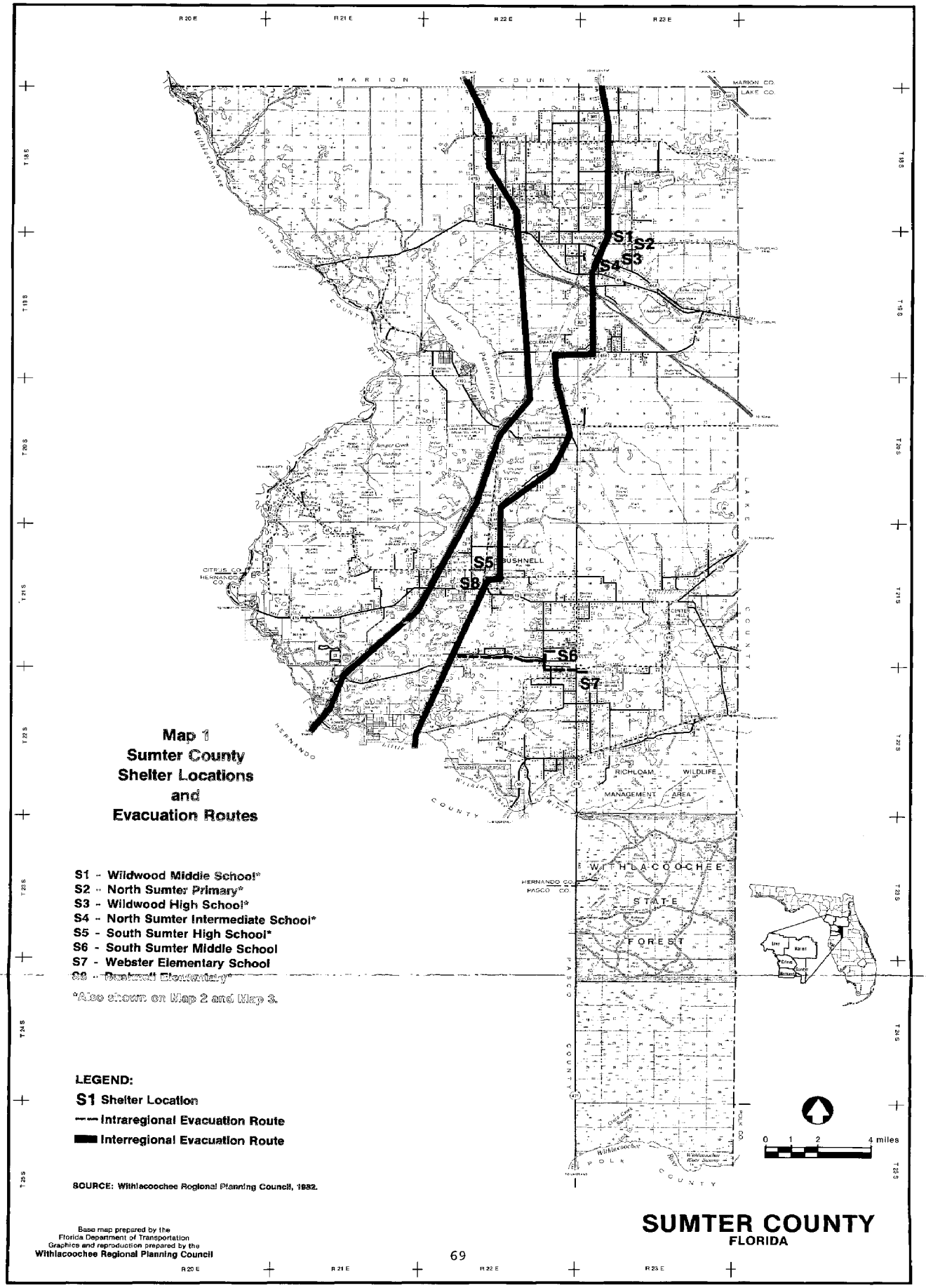
Shelter	Access Route
Webster Elementary School	US 301, SR 487, 471 S. Market Blvd.
South Sumter Middle School	US 301, SR 487, N. W. 10th Street
Bushnell Elementary School	US 301, Flannery Ave.
South Sumter High School	I-75, SR 48, SR 475
North Sumter Intermediate School	US 301, Cleveland Ave.
North Sumter Primary	US 301, Hall Ave., Wire Road, Darwick Ave.
Wildwood Middle School	US 301, Huey Ave.
Wildwood High School	US 301, Huey Ave.

TABLE 5-2

MARION COUNTY EVACUATION ROUTES TO SHELTERS

Shelter	Access Route
Stanton-Weirsdale Elementary	US 301, County Road 42
Lake Weir Middle	US 301, C. R. 42
Lake Weir High School	US 301, Belleview-Chandler Hwy., SR 464
Belleview Elementary	US 301, SR 484
Belleview-Santos Upper Elementary	US 301
College Park Elementary	I-75, SR 200
Eighth Street Primary (Ocala)	US 301, 8th Street
Forest High School (Ocala)	US 301, SR 40, SR 16th Street
Howard Upper Elementary (Ocala)	I-75, SR 40, S.W. 7th Avenue
Madison Street Primary (Ocala)	I-75, SR 40, S.W. 16th Ave. N.W. 4th St.
Oakcrest Elementary (Ocala)	US 301, N.E. 28th St., Alt. 301
Vanguard High School (Ocala)	I-75, US 27, Pine St., N.W. 28th St.
Fessenden Elementary (Zuber)	I-75, SR 326, Old 441
North Marion High School (Sparr)	I-75, SR 326, 25A, 316
North Marion Middle (Sparr)	I-75, SR 326, 25A, SR 316
Sparr Elementary (Sparr)	I-75, SR 318, SR 25, SR 316
Ft. McCoy Elementary	I-75, SR 318, SR 25, SR 316
Reddick-Collier Elementary	I-75, SR 318, SR 25, SR 316
East Marion Elementary (Lynne)	US 301, SR 40, County Road 326

Marion Education Resource Center (Ocala)	US 301, N.E. 35th St.
Hillcrest School (Ocala)	US 301, S.E. 17th St.
Wyomina Park Elementary (Ocala)	US 301, N.E. 3rd St., N.E. 12th Ave.
Ft. King Middle School (Ocala)	US 301, N.E. 3rd St. N.E. 17th Ave.



Map 1
Sumter County
Shelter Locations
and
Evacuation Routes

S1 - Wildwood Middle School*
S2 - North Sumter Primary*
S3 - Wildwood High School*
S4 - North Sumter Intermediate School*
S5 - South Sumter High School*
S6 - South Sumter Middle School
S7 - Webster Elementary School
S8 - Bushnell Elementary*

*Also shown on Map 2 and Map 3.

LEGEND:

S1 Shelter Location

Intraregional Evacuation Route

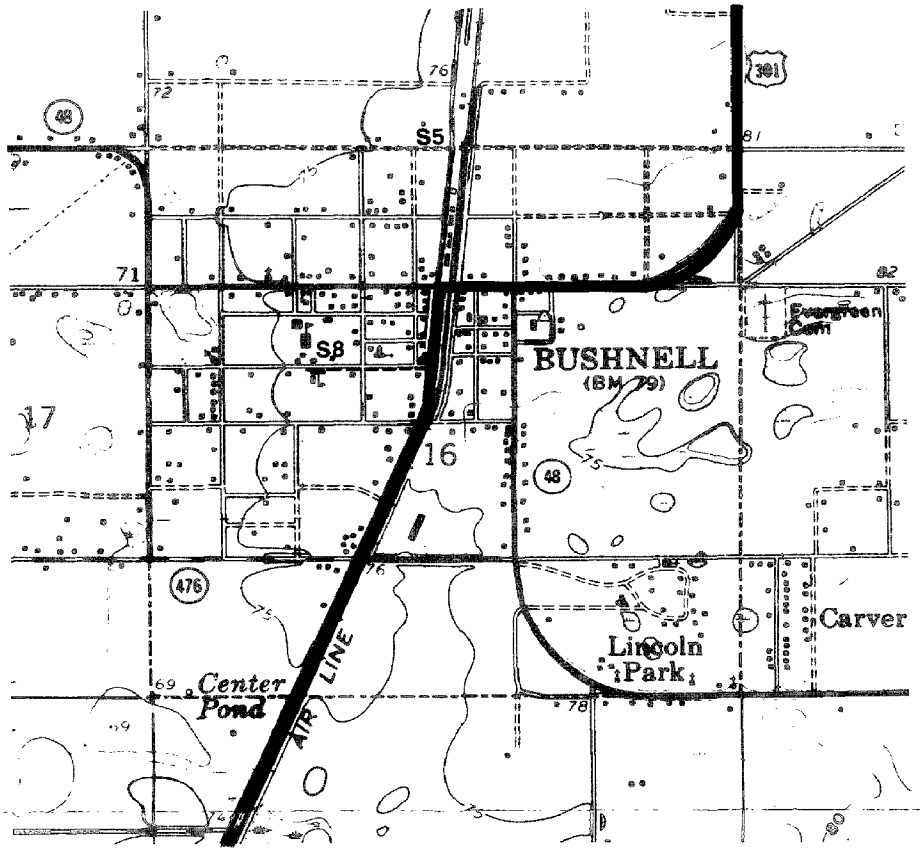
Interregional Evacuation Route

SOURCE: Withlacoochee Regional Planning Council, 1992.

Base map prepared by the
Florida Department of Transportation
Graphics and reproduction prepared by the
Withlacoochee Regional Planning Council

SUMTER COUNTY
FLORIDA

Map 2
City of Bushnell
Shelter Locations
and
Evacuation Routes



LEGEND:

S5 Shelter Location

Intraregional Evacuation Route

Interregional Evacuation Route

S5 - South Sumter High School
S8 - Bushnell Elementary

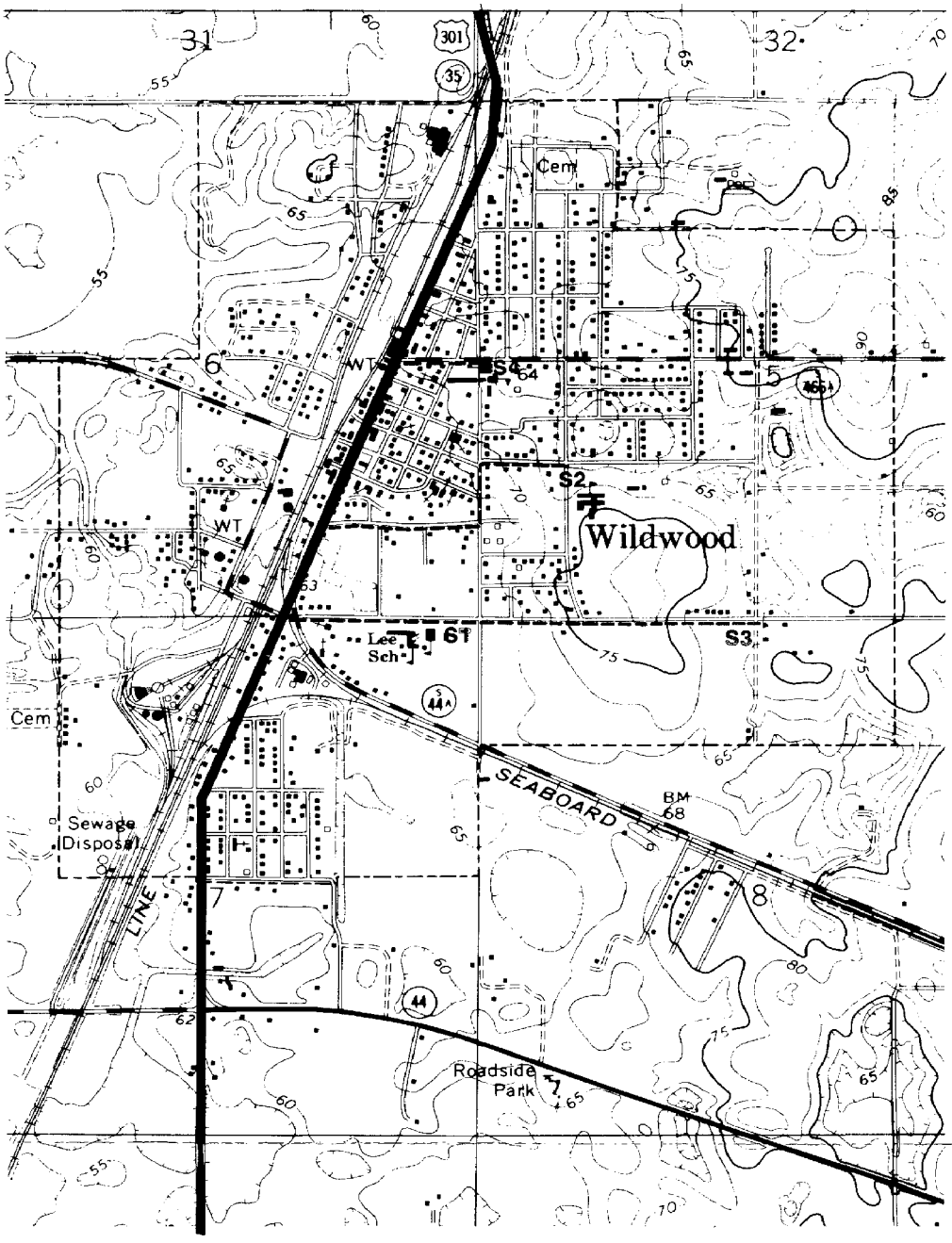
SOURCE: Withlacoochee Regional Planning Council, 1982.

0 500 1000 2000 FEET

Base map prepared by the
United States Department of the Interior
Geological Survey,
Topographic Quadrangle Series
Graphics and reproduction prepared by the
Withlacoochee Regional Planning Council

CITY OF BUSHNELL
FLORIDA

Map 3
City of Wildwood
Shelter Locations
and
Evacuation Routes



LEGEND:

S1 **Shelter Location**

Intraregional Evacuation Route

Interregional Evacuation Route

S1 - Wildwood Middle School
S2 - North Sumter Primary
S3 - Wildwood High School
S4 - North Sumter Intermediate School

SOURCE: Withlacoochee Regional Planning Council, 1982.

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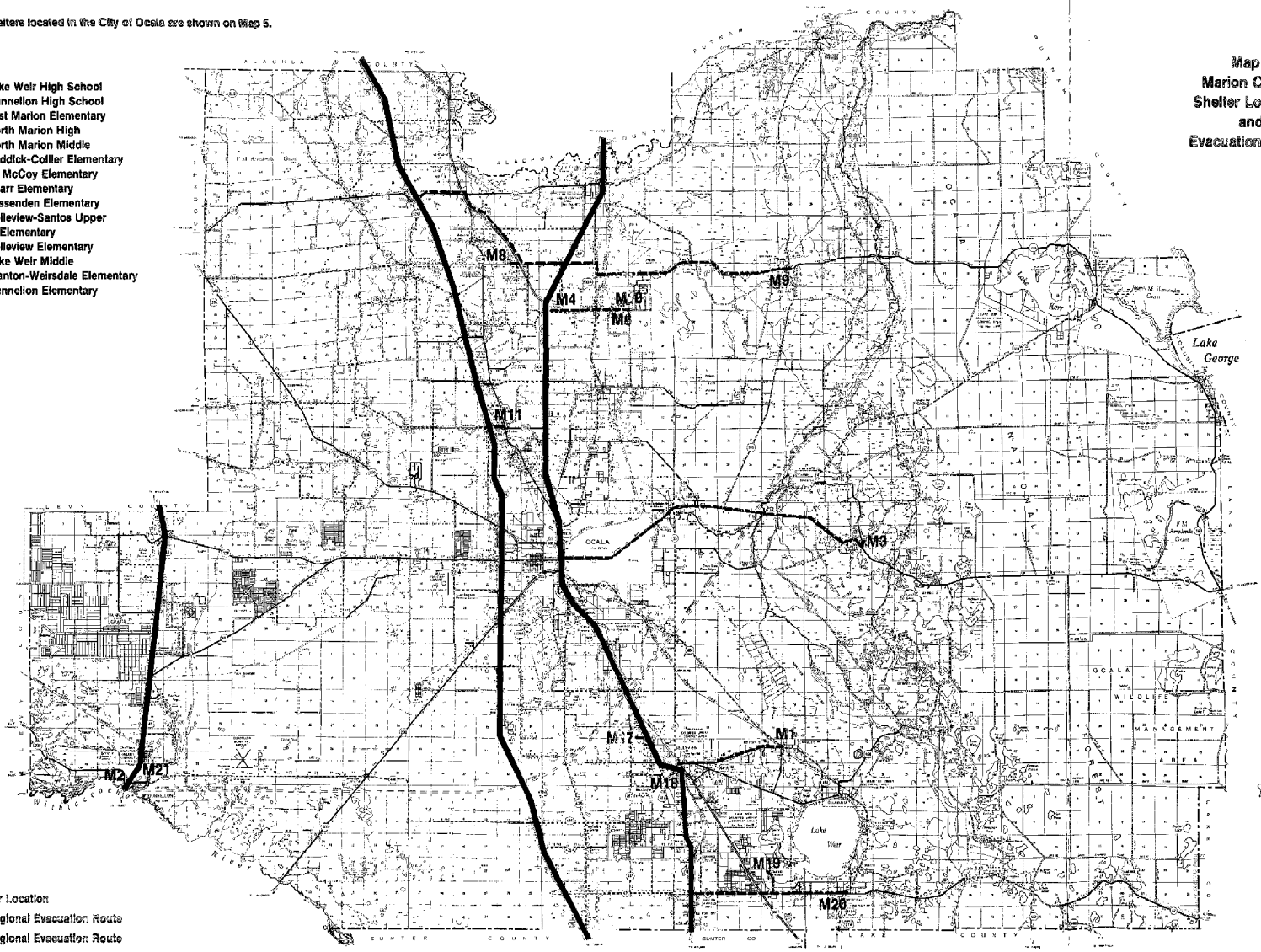
Base map prepared by the
United States Department of the Interior
Geological Survey,
Topographic Quadrangle Series
Graphics and reproduction prepared by the
Withlacoochee Regional Planning Council

CITY OF WILDWOOD
FLORIDA

NOTE: Shelters located in the City of Ocala are shown on Map 5.

M1 - Lake Weir High School
M2 - Dunnellon High School
M3 - East Marion Elementary
M4 - North Marion High
M6 - North Marion Middle
M8 - Reddick-Collier Elementary
M9 - Ft. McCoy Elementary
M10 - Sparr Elementary
M11 - Fessenden Elementary
M17 - Belleview-Santos Upper Elementary
M18 - Belleview Elementary
M19 - Lake Weir Middle
M20 - Stanton-Weirsdale Elementary
M21 - Dunnellon Elementary



Map 4
Marion County
Shelter Locations
and
Evacuation Routes

LEGEND:
M1 Shelter Location
Intraregional Evacuation Route
Interregional Evacuation Route

SOURCE: Withlacoochee Regional Planning Council, 1992.

Base map prepared by the
Florida Department of Transportation
Graphics and reproduction prepared by the
Withlacoochee Regional Planning Council

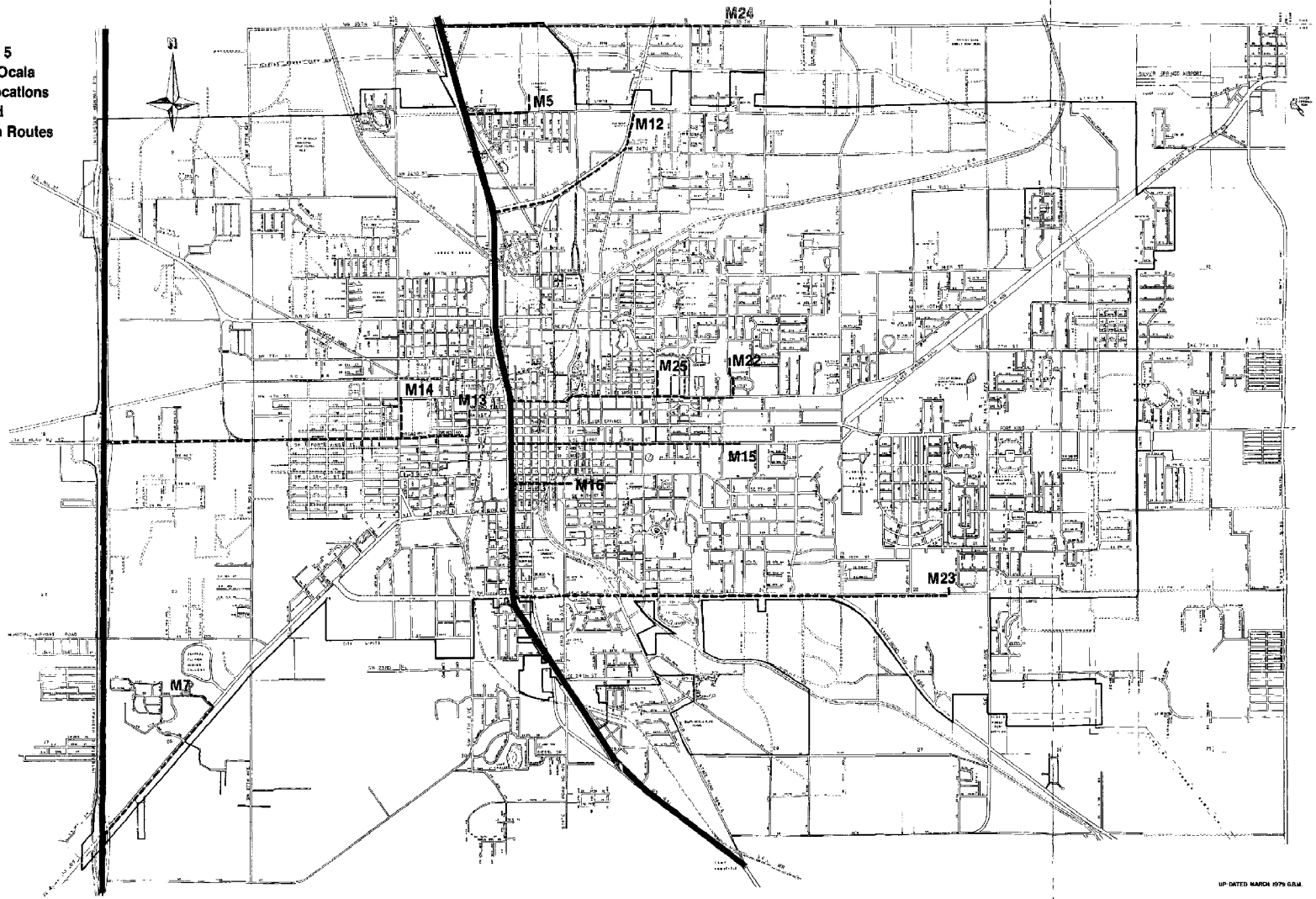
0 1 2 4 miles

MARION COUNTY
FLORIDA

CITY OF OCALA

FLORIDA

Map 5
City of Ocala
Shelter Locations
and
Evacuation Routes



UP-DATED MARCH 1979 G.B.M.

LEGEND:

M5 Shelter Location

—— Intraregional Evacuation Route

▬▬ Interregional Evacuation Route

M5 - Vanguard High
M7 - College Park Elementary
M12 - Oakcrest Elementary
M13 - Howard Upper Elementary
M14 - Madison Street Primary
M15 - Forest High School
M16 - Eighth Street Primary
M22 - Ft. King Middle School
M23 - Hillcrest School
M24 - Marion Education Resource Center
M25 - Wyomina Park Elementary

0 250 500 1000 FEET

Base map prepared by the
City of Ocala Engineering Department
(Updated March, 1979)
Graphics and reproduction prepared by the
Withlacoochee Regional Planning Council

SOURCE: Withlacoochee Regional Planning Council, 1982.

Shelter Assignment

To determine the shelter assignment of coastal evacuees it is necessary to identify that component of the evacuating population which will require public shelter. This component is quantified in Table 5-3, and is based upon the results of the Behavioral Survey for the Tampa Bay region. The total number of persons evacuating by route into the inland area is multiplied by the percentage of people who indicated that they would seek public shelter. The resulting figure is the estimated number of persons by route who will require shelter.

Since the greatest influx in our region occurs as a result of Regional Scenario 2, this scenario will be used in the shelter assignment.

Shelter Assignment was based upon the following criteria:

- capacity of shelter
- location of shelter
- routing by the shortest and most direct route possible
- routing away from known areas of roadway inundation due to freshwater flooding.

Using the criteria above, evacuees were allocated to shelters beginning at the southern portion of Sumter County and continuing through the northern portion of Marion County. The number of persons assigned to each shelter is the maximum safe capacity of that shelter. The number of people remaining after the available shelter space is exhausted is the pass-through population. This portion of the evacuees will have to travel to other areas to seek shelter. The shelter assignments are shown in Tables 5-4 and 5-5.

The overall shelter assignment for the inland counties is summarized in Table 5-6. The expected shelter demand amounts to a total of 38,686 persons. About 6,407 evacuees will be sheltered in Sumter with 25,519 in Marion County (a total of 31,922 for both counties). The difference between those being sheltered and the remaining evacuees requiring shelter is 6,760. This segment of the evacuation population will have to pass through the region to other areas.

TABLE 5-3

PERSONS EVACUATING OUT OF TAMPA BAY
VIA US 301 AND I-75

	Regional Scenario[3]	US 301 Total[1]	US 301 Seeking Shelter[2]		I-75 Total[1]	I-75 Seeking Shelter[2]	
Worst Probable Pasco Co.	1	38,601	19,108	(49.5%)	60,079	29,739	(49.5%)
Worst Probable Pinellas Co.	2	47,613	16,093	(33.8%)	66,842	22,593	(33.8%)
Worst Probable Hillsborough Co.	3	53,455	20,634	(38.6%)	66,872	25,813	(38.6%)
Worst Probable Manatee Co.	4	36,445	12,395	(34.0%)	43,993	14,958	(34.0%)
Paralleling Track	12	38,601	14,630	(37.9%)	53,616	20,321	(37.9%)

[1] Total number of people evacuating into the inland region by route regardless of trip destination.

[2] As determined by the Tampa Bay Behavioral Survey of Residents' Tendencies. See description in Chapter Two.

[3] If all three major evacuation routes are considered (I-75, US 301 and US 41), then the greatest overall influx into the Withlacoochee Region is created by Regional Scenario 2. The shelter demand generated by the conditions of Regional Scenario 2 are utilized in the assignment of coastal evacuees to shelter facilities.

TABLE 5-4

PRIMARY SHELTER ASSIGNMENT*
SUMTER COUNTY

US 301, Sumter County			
Total seeking shelter - 16,093			
Bushnell			
Bushnell Elementary		74	
South Sumter Middle		948	
Webster Elementary		514	
		1,536	1,536
Wildwood			
Wildwood Middle School		1,045	
North Sumter Primary		140	
Wildwood High		1,532	
North Sumter Intermediate		462	
		3,179	3,179
	Sub-total		4,715
I-75, Sumter County			
Total seeking shelter - 22,593			
Bushnell			
South Sumter High School		1,692	1,692
	Sub-total		1,692
	Sumter County Total Assigned		6,407

*Assumes Tampa Bay evacuation at level described in Regional Scenario 2 which is the worst probable case in terms of sheltering in the Withlacoochee Region.

TABLE 5-5

PRIMARY SHELTER ASSIGNMENT

MARION COUNTY

US 301, Marion County

Total seeking shelter (less those assigned to Sumter County shelters) - 11,378

Lake Weir Area		
Staton Weirsdale Elementary	512	
Lake Weir Middle	1,600	
Lake Weir High	3,346	
	5,458	5,458
Belleview		
Belleview-Santos Upper Elem.	810	
Belleview Elementary	166	
	976	976
Ocala		
Eighth Street Primary	812	
Forest High School	1,672	
Oakcrest Elementary	245	
	2,729	2,729
East Marion Area		
East Marion Elementary	1,168	
	1,168	1,168
Sub-total		10,331

TABLE 5-5 (cont.)

MARION COUNTY

I-75, Marion County

Total seeking shelter (less those assigned to Sumter County shelters) - 20,901

Ocala		
College Park Elementary	560	
Howard Upper Elementary	213	
Madison Street Primary	812	
Vanguard High School	4,854	
	6,439	6,439
North Marion County		
Fessenden Elementary	836	
North Marion High School	2,696	
North Marion Middle School	3,896	
Reddick-Collier Elementary	774	
Ft. McCoy Elementary	265	
Sparr Elementary	282	
	8,749	8,749
Sub-Total		15,188
Marion County Total Assigned		25,519

TABLE 5-6

SHELTER ASSIGNMENT
INLAND COUNTY SUMMARY

	Expected Shelter Demand	Assigned To Shelter		Pass-Through Region
		Sumter	Marion	
US 301	16,093	4,715	10,331	1,047
I-75	22,593	1,692	15,188	5,713
	38,686	6,407	25,519	6,760

Identification Of Checkpoint Sites To Serve Coastal Evacuees

Checkpoints have been designated at strategic points in the region to serve coastal evacuees. The purpose of these centers will be to provide supporting services and guidance to evacuees seeking arrangements for shelter; to provide a control mechanism for officials keeping track of who evacuated, how many evacuated, and where they went; and to support evacuation movement by providing maps and direction to designated sheltering areas. Depending on the magnitude of the evacuation, checkpoints may be used as centers for distribution of information or merely as traffic control points. The operation of a checkpoint should not cause congestion on the evacuation routes.

Since the checkpoint will control the flow of evacuees along major routes, it should also act as a communication center to relay information concerning numbers of evacuees, destinations and shelter conditions. The checkpoint will need sufficient equipment to communicate with the County Emergency Operations Center (EOC) and other shelters and checkpoints in the region. Shelters will be operated by county personnel in close coordination with the EOC. The following tables list the checkpoints in Marion and Sumter Counties along with the shelters associated with each checkpoint.

TABLE 5-7

Sumter County Checkpoints

Registration Center

Sumter County Fairgrounds
SR 471, Cross Road SR-48
1 Mile North of Webster on SR-471

Division 0001: Sumter South

Sumter County Courthouse
N. Florida Ave., Cross Road
Bushnell Plaza
Bldg. X0008

Sumterville Lodging Section

Lake/Sumter Mental Health
Hwy 301, Cross Road, SR 471
Bldg. X0888

Bushnell Lodging Section
City Hall
504 Market St., Cross Rd.
E. McEdlume Ave.
Bldg. X0180

Center Hill Lodging Section
City Hall
Virginia Ave., Cross Rd.
Orange Ave.
Bldg. X0245

Webster Lodging Section
Webster City Hall
SE 1st St., Cross Rd., First Ave.
Bldg. X0316

Division 0002: Wildwood

Division Headquarters and
Lodging Section - Wildwood
City Hall
100 N. Main St., Cross St.,
Wonder St.
Bldg. X0133

Lodging Section - Oxford
Post Office, Hwy 301
Cross Road, Creek Road
Bldg. X0159

TABLE 5-8

Sumter County
Checkpoint/Shelters

Checkpoints	Primary Shelters
Bushnell Sumter County Courthouse Bushnell City Hall	- South Sumter High - Bushnell Elementary
Webster Sumter County Fairgrounds Webster City Hall	- South Sumter Middle School - Webster Elementary
Lake/Sumter Mental Health	N/A
Center Hill Center Hill City Hall	N/A
Wildwood Wildwood City Hall	- N. Sumter Intermediate School - Wildwood Middle School - N. Sumter Primary School - Wildwood High School
Oxford Oxford Post Office	N/A
Center Hill Center Hill City Hall	N/A

TABLE 5-9

Marion County Checkpoints
(Division Headquarters)*

Division 0001
Lake Weir High School SR 464 (Maricamp Road) Candler
Division 0002
Dunnellon High School Chestnut Street Dunnellon
Division 0003
East Marion Elementary School SR 40 Lynne
Division 0004
North Marion High School CR 329 East Sparr
Division 0005
Vanguard High School 7 N.W. 28th St. Ocala
Division 0006
North Marion Middle School CR 329 West Sparr
Division 0007
College Park Elementary School 3155 S.W. 26th St. Ocala

*Checkpoints in Marion County are also known as Division Headquarters. The County is divided into 7 divisions. During a hurricane emergency evacuees are directed to the division headquarters which are opened first. As these shelters fill up, the facilities are used as staging areas for assignment of evacuees to other available shelters.

TABLE 5-10

MARION COUNTY
Checkpoints/Shelters

Checkpoints	Primary Shelters
Lake Weir High School	- Lake Weir Middle - Stanton-Weirsdale Elementary - Belleview-Santos Upper Elementary
Dunnellon High School	- Dunnellon Elementary
East Marion Elementary	- N/A
North Marion High School	- Ft. McCoy Elementary - Sparr Elementary
Vanguard High School	- Oakcrest Elementary - Madison St. Primary - Howard Upper Elementary - Eighth St. Primary - Forest High School
North Marion Middle	- Reddick-Collier Elementary - Fessenden Elementary
College Park Elementary	- N/A

CHAPTER VI

COORDINATION

Governmental Coordination Overview

In any hurricane evacuation, one of the most critical components of the decision-making process for local government officials is the timely issuance of the evacuation order to the endangered population. Within the State of Florida, the decision-making authority and power to order evacuation has been conferred or delegated to three different levels of government: State, County and municipal. Such emergency powers at the various levels of government are also innate responsibilities of the particular jurisdictions to safeguard the lives and property of their citizens. The Governor is empowered to issue an evacuation order; however, in the event that the Governor fails to order evacuation as early as required by local conditions, then the Board of County Commissioners may order evacuation within its physical boundaries. The same is true for a mayor of any municipality in the region. However, the evacuation order of a higher level of government is binding upon a lower level of government.

The authority to order evacuation of threatened Florida residents from an approaching hurricane is conferred to the Governor by Chapter 252.36 (5)(c) of the Florida Statutes, stating that the Governor may:

> "....direct and compel the evacuation of all or part of the population from any stricken or threatened area within the State if he deems this action necessary for the preservation of life or other disaster mitigation, response or recovery."

This power to order evacuation from an approaching hurricane conferred upon the Governor by Statute is delegated to the governing body of each political subdivision of the State by Executive Order 80-29. The term "political subdivision" is defined under the Statute as "any County or municipality created pursuant to law." The delegation of authority empowers the chief elected official of a county or municipality to order evacuation from any approaching storm.

The Need for Inter-jurisdictional Coordination

The diffusion of the authority to issue an evacuation order does not create problems during any localized evacuation. However, in the case of a hurricane which threatens the coastal residents of the Withlacoochee or Tampa Bay

Regions, it, by necessity, demands detailed inter-jurisdictional coordination. This is especially true in the event of the evacuation of the highly populated Tampa Bay Region with its many municipal and county jurisdictions all with the power to issue an evacuation order. An evacuation order not coordinated between municipal, and county officials can have a devastating impact upon the evacuating jurisdiction as well as surrounding jurisdictions. Prior to the evacuation order, region-wide traffic control and coordinated opening of the shelters should be established. Since a portion of the Tampa Bay evacuees will seek shelter in the Withlacoochee Region, a mechanism of coordination is needed to alert officials in the probable "host" counties of the impending evacuation.

Proposed Institutional Framework for Inter-Regional Evacuation

To prevent confusion during a large-scale evacuation, an institutional framework is needed to coordinate inter-regional evacuation.

The framework will serve as a mechanism whereby procedures for opening and operation of shelter facilities are coordinated with coastal evacuation movement.

The Area Coordinator, Bureau of Disaster Preparedness, will serve as the main focal point for the flow of information on hurricane warnings, evacuations and shelter openings.

When a hurricane warning triggers an evacuation of a municipality or county, the local official will report to the Area Coordinator on the extent of the evacuation and evacuation routes to be used. The Area Coordinator will then notify the State Bureau of Disaster Preparedness and the official of any county likely to be affected by the evacuation. A continuous flow of information from the evacuating areas will enable civil defense officials to open the appropriate number of shelters to cope with the influx of evacuees.

To formalize the procedures for the notification system, an advisory committee should be formed and meet periodically. This committee could test the system and refine the procedures to accomodate operational needs. All interested parties should be on this committee including representatives from:

- Law Enforcement Interests
- Civil Defense Directors
- School Boards
- Red Cross Organizations
- Selected State, Regional and Local Agencies.

In addition to developing procedures for notification of evacuations, the committee could also undertake other activities including:

- the formulation of written mutual aid agreements.
- the exchange of information and ideas on operational problems and concerns.
- development of a mock regional evacuation event to test the adequacy of local and regional hurricane plans.
- updating of the plans to more accurately reflect population changes, highway and bridge conditions and shelter availability.

By assuring rapid and reliable inter-regional communications, this framework will provide the best possible response to a hurricane emergency. A preliminary list of names and agencies participating on this committee is shown in Appendix K.

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APPENDIX

APPENDIX A

THE SAFFIR/SIMPSON HURRICANE SCALE

The Saffir/Simpson Hurricane Scale is used by the National Weather Service to give public safety officials a continuing assessment of the potential for wind and storm surge damage from a hurricane in progress. Scale numbers are made available to public safety officials when a hurricane is within 72 hours of landfall. Scale assessments are revised regularly as new observations are made, and public safety organizations are kept informed of new estimates of the hurricane's disaster potential.

Scale numbers range from 1 to 5. Scale No. 1 begins with hurricanes in which the maximum sustained winds are at least 74 mph, or which will produce a storm surge 4 to 5 feet above normal water level, while Scale No. 5 applies to those in which the maximum sustained winds are 155 mph or more, which have the potential of producing a storm surge more than 18 feet above normal.

The scale was developed by Herbert Saffir, Dade County, Florida, consulting engineer, and Dr. Robert H. Simpson, former National Hurricane Center director, and projects scale assessment categories as follows:

Category No. 1 - Winds of 74 to 95 mph. Damage primarily to shubbery, trees, foliage, and unanchored mobile homes. No real damage to other structures. Some damage to poorly constructed signs. Storm surge 4 to 5 feet above normal. Low-lying coastal roads inundated, minor pier damage, some small craft in exposed anchorage torn from moorings.

Category No. 2 - Winds of 96 to 110 mph. Considerable damage to shrubbery and tree foliage; some trees blown down. Major damage to exposed mobile homes. Extensive damage to poorly constructed signs. Some damage to roofing materials of buildings; some window and door damage. Coastal roads and low-lying escape routes inland cut by rising water two to four hours before arrival of hurricane center. Considerable damage to piers. Marinas flooded. Small craft in unprotected anchorages torn from moorings. Evacuation of some shoreline residences and low-lying island areas required.

Category No 3 - Winds of 111 to 130 mph. Foliage torn from trees; large trees blown down. Practically all poorly constructed signs blown down. Some damage to roofing materials of buildings; some window and door damage. Some structural damage to small buildings. Mobile homes destroyed. Storm surge 9 to 12 feet above normal. Serious flooding at coast and many smaller structures near coast destroyed; large structures near coast damaged by battering waves and floating debris. Low-lying escape routes inland cut by rising water three to five hours before hurricane center arrives. Flat terrain 5 feet or less above sea level flooded inland 8 miles or more. Evacuation of low-lying residences within several blocks of shoreline possible required.

Category No. 4 - Winds of 131 to 155 mph. Shrubs and trees blown down; all signs down. Extensive damage to roofing materials, windows, and doors. Complete failure of roofs on many small residences. Complete destruction of mobile homes. Storm surge 13 to 18 feet above normal. Flat terrain 10 feet or less above sea level flooded inland as far as six miles. Major damage to lower floors to structures near shore due to flooding and battering by waves and floating debris. Low-lying escape routes inland cut by rising water three to five hours before hurricane center arrives. Major erosion of beaches. Massive evacuation of all residences within 500 yards of shore possibly required, and of single-story residences on low ground within two miles of shore.

Category No. 5 - Winds greater than 155 mph. Shrubs and trees blown down; considerable damage to roofs on many residences and industrial buildings. Extensive shattering of glass in windows and doors. Some complete building failures. Small buildings over-turned or blown away. Complete destruction of mobile homes. Storm surge greater than 18 feet above normal. Major damage to lower floors of all structures less than 15 feet above sea level within 500 yards of shore. Low-lying escape routes inland cut by rising water three to five hours before hurricane center arrives. Massive evacuation of residential areas on low ground within five to ten miles of shore possible required.

Dr. Neil Frank, present National Hurricane Center director, has adapted atmospheric pressure ranges to the Saffir/Sampson Scale. These pressure ranges, along with a numerical breakdown of wind and storm surge ranges are:

APPENDIX A

SCALE NUMBER	CENTRAL PRESSURES MILLIBARS	INCHES	WINDS (MPH)	SURGE (FT.)	DAMAGE
1	980	28.94	74- 95	4- 5	Minimal
2	965-979	28.5 -28.91	96-110	6- 8	Moderate
3	945-964	27.91-28.47	111-130	9-12	Extensive
4	920-944	27.17-27.88	131-155	13-18	Extreme
5	920	27.17	155+	18+	Catastrophic

APPENDIX B

SUMTER COUNTY

HOUSING UNITS IN FLOOD PRONE AREAS

U.S.G.S. Quadrangle	Housing Units
Bay Lake	0
Bushnell	3
Center Hill	0
Clay Sink	1
Lady Lake	0
Lake Panasoffkee	6
Leesburg West	3
Mascotte	0
Nobleton	0
Oxford	10
Rutland	72
St. Catherine	1
Stokes Ferry	5
Wahoo	0
Webster	3
Wildwood	4
TOTAL	108

Source: U.S.G.S. Flood Prone Area Maps, 1974.
Aerial Photography, January, 1981.

APPENDIX C

MARION COUNTY

NUMBER OF DWELLING UNITS IN FLOOD PRONE AREAS

U.S.G.S. Quadrangle	Housing Units
Tidewater	0
Yankeetown SE	0
Morriston	0
Romeo	7
Dunnellon	5
Flemington	0
Fairfield	8
Cotton Plant	0
Dunnellon SE	5
Stokes Ferry	0
McIntosh	7
Reddick	0
Ocala West	0
Shady	0
Lake Panasoffkee	0
Citra	0
Anthony	0
Ocala East	35
Belleview	33
Oxford	0
Keuka	0
Eureka Dam	18
Fort McCoy	5
Lynne	16
Lake Weir	39
Lady Lake	0
Radman	0
Lake Delancy	19
Lake Kerr	98
Half Moon Lake	33
Lake Mary	0
Emeralda Island	8
Welaka	0
Salt Springs	84
Juniper Springs	4
Farles Lake	3
Umatilla	0
TOTAL	427

APPENDIX D

INVENTORY CRITERIA OF CURRENT PRIMARY PUBLIC SHELTERS

I. GENERAL INFORMATION

A. Name of Structure _____

B. Address _____

_____

C. Telephone Number _____

D. Type of Structure _____
(i.e., school, commercial building)

E. Owner:

_____ County School Board

_____ County

Private _____

_____

_____

F. Contact Person:

Name _____

Address _____

_____

Phone Number _____

II. SITE LOCATION INFORMATION

A. Building Site Elevation (of ground floor in feet above mean sea level) _____

B. Total Number of Acres _____

C. Number of Parking Spaces _____

D. Number of Acres Conducive for Potential Parking _____

E. Location in Terms of a Flood Hazard Area _____

F. Public Safety Jurisdictions:

1. Fire _____

2. Rescue _____

3. Law Enforcement _____

III. BUILDING CONSTRUCTION CHARACTERISTICS

A. Year Constructed _____

B. Building Classification by Construction

_____ Type I _____ Type IV

_____ Type II _____ Type V

_____ Type III _____ Type VI

C. Roof Type:

_____ Hip _____ Flat _____ Gable _____ Gambrel

_____ Mansard _____ Other

D. Roof Classification

_____ Type A _____ Type B _____ Type C _____ Other

E. Roof Covering _____

F. Roof Anchorage _____

G. Exterior Walls:

_____ Stucco Masonry _____Brick Masonry _____Masonry

_____Jumbo Brick _____Block Masonry _____Clay Tile Stucco

_____ Other

H. Floor Covering

___Carpeting ___Wood ___Tile ___Cement ___Other

I. Number of Floors

J. Types of Windows:

___Awning ___Casement ___Double Hung ___Horizontal

___Louver ___Hopper ___Jalousie ___Pivoted ___Other

K. Building Type: _____Single _____Wing _____Other

IV. CODE CONFORMANCE

			Date of Last Inspection
Building Code	_____Yes	_____No	_____
Fire Code	_____Yes	_____No	_____
Health Code	_____Yes	_____No	_____

V. SHELTER AMENITIES

A. Source of Power

1. Ongoing

___Electric ___Gas ___Other

2. Auxiliary

___Generator ___Battery Operated ___Other

B. Sources of Food

1. Number of people who can be served, based on three daily meals _____

2. For how long can food service be provided?_____

C. Sanitary Facilities

1. Toilet Facilities:

a) Number of restrooms: ___Men ___Women

b) Number of showers: ___Men ___Women

2. Type of wastewater treatment facilities:

a) _____Sewer _____Septic _____Package Plant _____Other

b) _____Independent system _____Dependent system

c) Serviced by _____

3. Potable water supply facilities:

a) Available emergency supply_____

b) _____Independent system _____Dependent system

c) Serviced by _____

D. Kitchen Facilities

1. Sources of power

a) Ongoing Power

_____Electric _____Gas _____Other

b) Auxiliary Power

_____Generator _____Battery Operated _____Other

2. Total Number of Square Footage _____

3. Total Number of Sinks _____

E. Communications

1. Does the shelter have a public address system?___Yes ___No

Control location_____

2. Does the shelter have a weather alert radio? ___Yes ___No

Designated Location_____

3. Other Communication Devices:

___Telephone ___Citizen Band Radio ___Ham-operated radio; is so, is antenna and coax installed? ___Yes ___No

___Other

Designated Location

F. First Aid Facilities

1. Does the building have an infirmary? ___Yes ___No

2. What is the status of the first aid supplies?

___Excellent ___Good ___Fair ___Poor

3. Is any special medical equipment or personnel available?

___Oxygen _____ __Doctor _____

_____ _____ __Nurse _____

4. Are facilities available to accommodate the infirm, elderly and/or handicapped? _____Yes _____No

_____Ramps _____Specially equipped restrooms

_____Other

G. Transportation Facilities

1. Is there a means of transportation at the site?

_____Yes _____No

2. What type?

_____Bus _____Van _____Automobile _____Other

3. Does vehicle have a two-way radio? ___Yes ___No

VI. DESIGNATED AREAS OF SAFETY AND PLANNED CAPACITY

Identification of Area			Square Footage	Planned Capacity	
Area Name	Building #	Room #		20 sq.ft.	40 sq.ft.
			Total:		

VII. EMERGENCY MANPOWER

A. Designated Emergency Administrator of Shelter

Name _____

Address _____

Phone Number _____

B. Alternate Emergency Administrators of Shelter

Name _____ Name _____

Address _____ Address _____

Phone Number _____ Phone Number _____

SHELTER VICINITY MAP

MAJOR STREET ACCESSIBILITY TO SHELTER

_____

_____

_____

_____

_____

_____

APPENDIX E

REGIONAL SCENARIOS

The five regional evacuation scenarios in the table below were formulated to represent a worst probable scenario for each county in the Tampa Bay Region (Regional Scenarios 1 through 4) and also a regional scenario representing the trend of county scenarios predicted from a paralleling hurricane (Regional Scenario 5). These five combinations of county scenarios also generally reflect the trends identified from all county scenarios created by the simulation of the reference hypothetical hurricanes through the SLOSH model. This information was used to predict intercounty impacts on clearance time in the evacuation portion of the Tampa Bay study.

REGIONAL SCENARIOS

COUNTY	1	2	3	4	5
Pasco Scenario	E	D	C	A	B
Pinellas Scenario	C	E	D	A	B
Hillsborough Scenario	B	D	E	C	A
Manatee Scenario	B	C	D	E	A

Regional Scenario 1: Worst probable scenario from Pasco County (E=18'+ of shoreline surge); Pinellas County Scenario C (9'-12' shoreline surge); Hillsborough County Scenario B (6'-8' shoreline surge); and Manatee County Scenario B (6'-8' shoreline surge). This general combination of vulnerable levels is predicted to be created by landfalling hurricane moving on the "NN" track (see Figure 2 and Table 5).

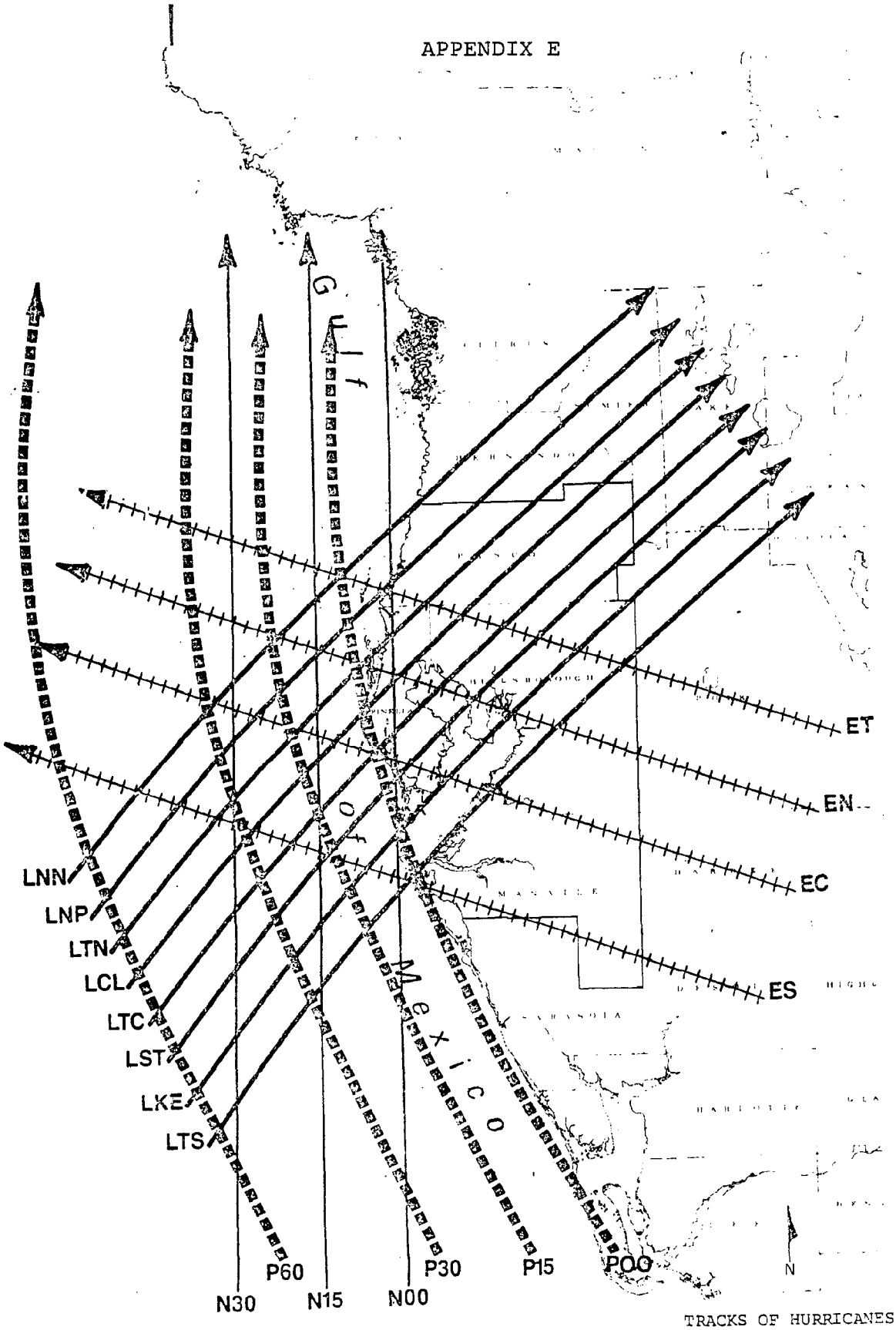
Regional Scenario 2: Worst probable scenario for Pinellas County (E=18' + of shoreline surge); Pasco County Scenario D (13'-18' shoreline surge); Hillsborough County Scenario D (13'-18' shoreline surge0: and Manatee County Scenario C (9'-12' shoreline surge). This general combination of vulnerability levels is predicted to be created by landfalling hurricanes moving on the "TN" track (see Figure 2 and Table 5).

Regional Scenario 3: Worst probable scenario for Hillsborough County (E=18' of shoreline surge); Pasco County Scenario C (9'-12' shoreline surge); Pinellas County Scenario D (13'-18' shoreline surge); Manatee County Scenario D (13'-18' shoreline surge). This general combination of vulnerability levels is predicted to be created by landfalling hurricanes moving on the "TC" track (see Figure 2 and Table 5).

Regional Scenario 4: Worst probable scenario for Manatee County (E=18'+ of shoreline surge); Pasco County Scenario A (4'-5' shoreline surge); Pinellas County Scenario A (4'-5' shoreline surge); and Hillsborough County Scenario C (9'-12' shoreline surge). This general combination of vulnerability levels is predicted to be created by landfalling hurricanes moving on the "KE" track (see Figure 2 and Table 5).

Regional Scenario 5: This regional scenario represents the combination of county vulnerability levels predicted to be created by paralleling hurricanes moving on the tracks depcited on Figure 2 and described on Table 5. Pasco County Scenario B (6'-8' shoreline surge); Pinellas County Scenario B (6'-8' shoreline surge); Hillsborough County Scenario A (4'-5' shoreline surge); and Manatee County Scenario A (4'-5' shoreline surge).

APPENDIX E



TRACKS OF HURRICANES
Simulated by SLOSH Numerical
Storm Surge Model
FIGURE 2

Source: Tampa Bay Regional Planning Council, Regional Hurricane Evacuation Plan. November, 1981.

TABLE 5

APPENDIX E

REFERENCE HURRICANES
FOR THE
TAMPA BAY REGION HURRICANE EVACUATION PLAN

MODEL TYPE LOCATION CATEGORY	Landfall/Exiting Point or Closest Approach	Area Receiving Maximum Surge/Winds	Pressure Drop (Milli-bars)	Radius of Maximum Winds (Status Miles)	Forward Speed (Miles per hour)	Direction Storm Moving Toward (Degree Clockwise from North)
SL-L-NN-1	Aripeka	New Port Richey	30	15	15	40°
SL-L-NN-2	Aripeka	New Port Richey	40	15	15	40°
SL-L-NN-3	Aripeka	New Port Richey	60	15	15	40°
SL-L-NN-4	Aripeka	New Port Richey	80	15	15	40°
SL-L-NN-5	Aripeka	New Port Richey	100	10	15	40°
SL-L-TN-1	Tarpon Springs	Belleair Beach	30	15	15	40°
SL-L-TN-2	Tarpon Springs	Belleair Beach	40	15	15	40°
SL-L-TN-3	Tarpon Springs	Belleair Beach	60	15	15	40°
SL-L-TN-4	Tarpon Springs	Belleair Beach	80	15	15	40°
SL-L-TN-5	Tarpon Springs	Belleair Beach	100	10	15	40°
SL-L-TC-1	Madeira Beach	Mouth of Tampa Bay	30	15	15	40°
SL-L-TC-2	Madeira Beach	Mouth of Tampa Bay	40	15	15	40°
SL-L-TC-3	Madeira Beach	Mouth of Tampa Bay	60	15	15	40°
SL-L-TC-4	Madeira Beach	Mouth of Tampa Bay	80	15	15	40°
SL-L-TC-5	Madeira Beach	Mouth of Tampa Bay	100	10	15	40°
SL-L-KE-1	Egmont Key	Longboat Key	30	15	15	40°
SL-L-KE-2	Egmont Key	Longboat Key	40	15	15	40°
SL-L-KE-3	Egmont Key	Longboat Key	60	15	15	40°
SL-L-KE-4	Egmont Key	Longboat Key	80	15	15	40°
SL-L-KE-5	Egmont Key	Longboat Key	100	10	15	40°
SL-E-T-3	Anclote Keys	McKay Bay	60	15	15	288°
SL-E-N-3	Dunedin	McKay Bay	60	15	15	288°
SL-E-C-3	St. Petersburg Beach	Terra Ceia Bay	60	15	15	288°
SL-E-S-3	Whitney Beach	Sarasota Bay	60	15	15	288°
SL-P-P00-1	Egmont Key	Boca Ciega Bay/ St. Joseph Sound	30	15	15	335°
SL-P-P00-2	Egmont Key	Boca Ciega Bay/ St. Joseph Sound	40	15	15	335°
SL-P-P00-3	Egmont Key	Boca Ciega Bay/ St. Joseph Sound	60	15	15	335°
SL-P-P15-1	15 mi. West of Egmont Key	Boca Ciega Bay	30	15	15	335°
SL-P-P15-2	15 mi. West of Egmont Key	Boca Ciega Bay	40	15	15	335°
SL-P-P15-3	15 mi. West of Egmont Key	Boca Ciega Bay	60	15	15	335°
SL-P-P30-1	30 mi. West of Egmont Key	Boca Ciega Bay	30	15	15	335°
SL-P-P30-2	30 mi. West of Egmont Key	Boca Ciega Bay	40	15	15	335°
SL-P-P30-3	30 mi. West of Egmont Key	Boca Ciega Bay	60	15	15	335°
SL-P-P60-4	60 mi. West of Egmont Key	Boca Ciega Bay	80	20	15	335°
SL-P-P60-5	60 mi. West of Egmont Key	Pinellas/Pasco Gulf Beaches	100	10	15	335°

SL - SLOSH (Sea, Lake, and Overland Surges from Hurricanes) Model
L - Landfalling Hurricane
E - Exiting Hurricane
P - Paralleling Hurricane

Source: Tampa Bay Regional Planning Council, Regional Hurricane Evacuation Plan. November, 1981.

APPENDIX F

ASSUMPTIONS USED IN DETERMINING COASTAL COUNTY DEMAND FOR SHELTER FACILITIES IN INLAND COUNTIES

I. Behavioral Assumptions

A. Of the population evacuating out of the Tampa Bay Region, the following may be seeking shelter in interior counties: Pasco County, 49.5%; Pinellas County, 33.8%; Hillsborough County, 38.6%; Manatee County, 34.0% (Source: Tampa Bay Hurricane Evacuation Plan Technical Data Report).

B. That portion of the population seeking shelter who cannot find it due to an inadequate supply within their county will evacuate out of both Tampa Bay and Southwest Florida Planning Regions.

II. Conversion of Population to Number of Vehicles

A. Vehicle occupancy rates for the Tampa Bay Region were derived from 1970 Census Data updated to 1979 data (Source: Tables G-11 through G-15, Tampa Bay Regional Hurricane Evacuation Plan Technical Data Report).

III. Regional Traffic/Population Assignments

A. Traffic assignments on routes out of the Tampa Bay Region were derived from Appendix G, Tampa Bay Regional Hurricane Evacuation Plan Technical Data Report.

1. That portion of a county's population evacuating on I-75 would remain on that route until they leave the region.

2. Evacuees using U.S. 41 would gravitate towards I-75 as they leave their respective counties.

APPENDIX G

BEHAVIORAL SURVEY METHODOLOGY

A behavioral survey was conducted in the inland counties to provide support data for the regional preparedness plan in the event of a hurricane.

In the counties of Marion and Sumter, mobile homes were considered to represent the greatest population-at-risk that could be practically surveyed. More than 500 residents in these counties were telephoned about their responsiveness to an evacuation order, evacuation destinations, need for specialized transportation, familiarity with hurricanes and similar concerns.

The behavioral survey was completed in four steps:

1. Design of the survey questionnaires.

2. Drawing of the samples.

3. Conducting of the surveys.

4. Compilation and analyses.

The methodologies for these four steps are discussed below.

Design of the Survey Questionnaire

H. W. Lochner, Inc. drafted a notification postcard and survey instruments. This draft was reviewed by the staff of the Withlacoochee Regional Planning Council. After incorporating the changes recommended by the Council staff, the survey was tested on 25 households of varying economic and educational backgrounds in varying geographic areas. Minor wording changes were made and the notification postcard and survey instrument were finalized.

The purpose of the postcard was to maximize the cooperation by potential respondents and minimize the refusal rate. The less refusals, the more confidence can be placed in the eventual results. Refusals can represent a source of bias that is virtually impossible to predict. The original mailed postcards had green lettering and seals on cream stock. Special efforts were made for a professional image with the postcard. An example of the notification postcard is shown in Appendix H.

The survey questionnaire is also shown in Appendix I. It was designed to be short and simple for clarity and ease of administration. The format was designed to be similar to other surveys in Florida so that comparisons of results with other regions is possible.

Drawing of the Sample

Initially, the potential interviewees included residents of any registered mobile home in the two inland counties. In drawing the sample, the goal was to assemble enough names, addresses and phone numbers so that a total of 500 completions would be achieved across the two inland counties. Approximately 20 percent extra names were obtained.

In drawing of the sample of the mobile homes, the cooperation of the county tag agencies was excellent. The Lochner staff was allowed complete access to the necessary records. Names and addresses were selected by finding a random starting point and then proceeding along in accordance with a skip interval number that would produce the desired amount of names and addresses. These names and addresses were simultaneously checked for in the phone directory. Only those registered mobile home owners who were also listed in the phone directory were included in the survey.

Conducting the Survey

One to three days before being called, each potential respondent received the notification postcard. The telephone calls were conducted by the professional interviewers of Gulf Coast Research Corporation of St. Petersburg. The calls extended from May 10, 1982 to May 24, 1982. Five hundred surveys were completed. The public was receptive and the refusal rate was minimal.

Up to four call-backs were placed before abandonment of a potential respondent. The call-back procedure minimized bias. For example, large families should be more apt to answer the phone on the first call than would single-person households. Without call-backs, the single-person households would probably have been less represented.

Compilation and Analysis

The data was compiled and a 95 percent confidence interval was calculated. The 95 percent confidence interval means that if the survey project were repeated 20 times, the results would fall within the indicated confidence interval 19 out of 20 times (19 ÷ 20 = 95 percent).

The confidence interval itself is the method of expressing and qualifying a percentage answer. For example, a typical answer would be that 75% $\pm$ 4% would take a certain action. Five hundred completed surveys allows us to know that the answers will all have confidence intervals of $\pm$ 5% or better (an even smaller interval such as $\pm$ 3%).

The analysis of the results was then accomplished. This is presented in Chapter III on Behavioral Data.

APPENDIX H

WITHLACOOCHEE REGIONAL PLANNING COUNCIL
1241 S.W. 10th Street
Ocala, Florida 32674-2798

DEAR RESIDENT OR VISITOR:

YOU HAVE BEEN SELECTED TO PARTICIPATE IN A HURRICANE EVACUATION SURVEY BY THE WITHLACOOCHEE REGIONAL PLANNING COUNCIL IN CO-OPERATION WITH YOUR COUNTY CIVIL DEFENSE DEPARTMENT. WE ARE INTERESTED IN KNOWING HOW YOU WOULD RESPOND IN THE EVENT OF A HURRICANE STRIKING YOUR AREA: HOW SOON YOU WOULD LEAVE; WHERE YOU WOULD GO; IF YOU WOULD NEED ASSISTANCE IN EVACUATING AND SO FORTH.

A REPRESENTATIVE WILL PHONE YOU SHORTLY. YOUR ANSWERS TO A FEW BRIEF QUESTIONS ARE IMPORTANT IN HELPING TO DEVELOP AN EFFECTIVE PLAN FOR YOUR AREA. YOUR COOPERATION IS APPRECIATED.

VERY TRULY YOURS,

Jackson E. Sullivan Jr.

JACKSON E. SULLIVAN, A.I.C.P.
EXECUTIVE DIRECTOR

WITHLACOOCHEE REGIONAL PLANNING COUNCIL

APPENDIX I

INLAND SURVEY

(Mobile homes only)

(MAILING LABEL)

9999 999-9999 999.99

Respon-dent No. Phone No. Location No.

Call No / Attempt Detail	1	2	3	4	5
Date	/	/	/	/	/
Time	___ .m.	___ .m.	___ .m.	___ .m.	___ .m.
Result					

Person, Time & Date for call-back _____ (name) _____ (time) .m.

/ /82

INTERVIEWER: IF INITIAL RESPONDENT IS APPARENTLY AN ADULT AND, THEREFORE, POSSIBLY THE DESIRED RESPONDENT (HEAD OF HOUSEHOLD OR DECISION-MAKER AS TO WHAT TO DO BEFORE A HURRICANE) CONTINUE; OTHERWISE, MAKE AN APPOINTMENT TO CALL BACK AT A TIME THAT THE RESPONDENT CAN BE REACHED.

INTRODUCTION: "Hello, my name is _____ and I am working on the Hurricane Plan being prepared by the Withlacoochee Regional Planning Council. May I speak to someone who would help decide what to do if a hurricane threatened? (INTERVIEWER, IF PERSON WITH WHOM YOU ARE SPEAKING IS A DESIRED RESPONDENT, CONTINUE WITH .....) "Your answers to a few brief questions will be greatly appreciated." (IF YOU START TO MAKE SPECIFIC ARRANGEMENTS TO CALL BACK, BE SURE IT IS A MOBILE HOME BY ASKING "Am I correct that you live in a mobile home?")

1. Do you live in a mobile home? Yes ( ) No ( )
(IF "NO", SAY "Excuse me, but my instructions at this time are to interview only mobile home owners. Your cooperation is still appreciated").

2. If a hurricane threatened, what information source or who would you depend upon most in deciding whether you would evacuate? (PAUSE, IF NO RESPONSE, ASK)
   a. Television ( )
   b. Radio ( )
   c. Local government or law enforcement officials ( )
   d. Friend or neighbor ( )
   e. Relative ( )

3. For this next question, please assume that everyone is home and you were ordered by a governmental authority to evacuate. How soon could you be ready and would you leave? (PAUSE: IF NO RESPONSE, ASK)
   a. Immediately ( )
   b. Certain number of hours (_____) number
   c. Never ( )

FIGURE 3

4a. How many vehicles are there at your home? _____ (number)
(IF NONE, SKIP TO Q4f)

4b. How many of these vehicles are travel trailers, campers or motor homes? _____ (number)

(IF THE RESPONDENT ASKS, DO NOT INCLUDE VANS AND TRUCKS IN Q4b. VANS AND TRUCKS WOULD BE PART OF THE ANSWER TO Q 4a).

(IF THERE ARE NO TRAVEL TRAILERS, CAMPERS OR MOTOR HOMES, GO TO Q4e)

4c. How many of these travel trailers, campers or motor homes would you use to evacuate? _____ (number)

4e. How many vehicles total would you use to evacuate? _____ (number) (GO TO Q5)

4f. (IF "NONE" IN Q 4a) Would you need transportation such as a bus or a taxi?
Yes ( ) No ( )

5. How many people live in your home including yourself? _____ number

6. Is there anybody who could not be evacuated without help from outside your home?
Yes ( ) No ( )

7. After leaving, where would you go? (PAUSE, IF NO RESPONSE, ASK)

a. To a designated Red Cross Shelter ( )
b. To a friend or relative ( )
(IF "YES", ASK) And in what county would that be please?

_____
(TAKE A CITY NAME, IF NECESSARY)

c. To a hotel or motel ( ) (IF "YES" ASK) And in what county would that be please?

_____
(TAKE A CITY NAME, IF NECESSARY)

d. Don't know _____ (DON'T READ "DON'T KNOW").

8. Have you ever experienced a direct hurricane strike? Yes ( ) No ( )
(IF "YES", ASK) When and where was that, please?

_____ (Year) _____ (City, State)

9. Do you think that your home is strong enough to be safe against hurricane winds?
(DON'T OFFER AN ANSWER) Yes ( ) No ( ) Maybe ( )

10. And I understand that your address is ....(READ FROM LABEL. MAKE NECESSARY CORRECTION.

Thank You For Your Help!

INTERVIEWER'S INITIALS _____

FIGURE 3

APPENDIX J

PROPOSED SHELTERS FOR TAMPA BAY EVACUEES
FROM STATE ROAD 41

Shelter Name	Capacity[1/]
Levy County	
Joyce Bullock Elementary	1,055
Williston High	1,159
Williston Intermediate	385
Citrus County	
Citrus High School	2,347
Floral City Elementary	593
Hernando Elementary	600
Inverness Middle School	3,224
Inverness Primary School	1,397
Lecanto Elementary	1,869
Lecanto Middle	2,519
Hernando County	
Mitchell L. Black Elementary	1,402
Eastside Elementary	1,091
Hernando High	666
D. S. Parrott Jr. High	2,122
Marion County	
Dunnellon High School	1,452
Dunnellon Elementary	480
TOTAL	22,361

Source: WRPC Hurricane Shelter Survey, July, 1982.

[1/]Assuming no evacuation order is issued for the Withlacoochee Region.

NOTE: Expected shelter demand from U. S. 41 amounts to a total of 16,793 persons.

APPENDIX K

PROPOSED ADVISORY COMMITTEE TO COORDINATE
INTER-REGIONAL EVACUATION

A. Law Enforcement

Officer Donald Tyre	Florida Marine Patrol
Lieutenant T. H. Boatright	Dept. of Highway Safety and Motor Vehicles
Mr. E. J. Hollingfield	Florida Highway Patrol
Capt. Gerrard King	Marion County Sheriff's Dept.
Pat Hartley	Levy County Sheriff
Melvin Kelly	Hernando County Sheriff
Jim Floyd	Sumter County Sheriff's Office
Coley Campbell	Citrus County Sheriff's Dept.
Dale Adams	Ocala Police Department
Pat Johnson	Marion County Sheriff's Dept.

B. Civil Defense Directors

George J. Allen	Citrus County
Lewis Moss	Hernando County
William Cobb	Levy County
Joe Gilbreath	Marion County
Vernon Berry	Sumter County

C. School Boards

Edward J. Murphy	Citrus County School Board
Bill Hutto	Hernando County School Board
Francis Rowell	Levy County School Board
Wiley Kerlin	Marion County School Board
James R. Edwards	Sumter County School Board

D. Red Cross Organizations

Judd Wood	American Red Cross-Florida Division
Mae Spencer	ARC/Citrus Co. Reserve Chapter
Flora Tully	ARC/Citrus Co. Reserve Chapter

E. State, Regional and Local Agencies

Caroline Brown	Florida HRS
Marvin Coates	Florida DOT
Dan Trescott	Bureau of Disaster Preparedness
J. C. Sanford	Florida DOT
Muriel H. Lee	Area Agency on Aging
Ted Keith	Area Coordinator/Bureau of Disaster Preparedness
Janice Lee	East Central Florida RPC
Eunice Neville	Withlacoochee RPC
Kevin Smith	Withlacoochee RPC
Charles Black	Withlacoochee RPC
Mark Sinclair	Withlacoochee RPC
Bill Miller	Central Florida RPC
Chuck Smith	City of Ocala
Norm Swetman	Citrus County Chronicle
Chris Mendela	Marion County Schools
John Sible	Marion Baptist Association
Kenneth Reddemann	Citrus County Planning Division
Richard Cleaver	Levy County Planning/Zoning

Additional agencies or individuals may be included on the committee as appropriate.

WITHLACOOCHEE REGIONAL PLANNING COUNCIL

Jackson E. Sullivan, Jr.
Executive Director

Mark Sinclair
Associate Planner

James D. Mims
Planning Director

Tim Cannady
Research Assistant

Peggy Alexander
Finance Director

Vivian Whittier
Research Assistant

William E. Taylor
Graphics Chief

Elizabeth Horvath
Archaeological Intern

Joyce Cusick
Principal Planner

Lorene Finch
Executive Secretary

*Kevin Smith
Associate Planner

Glenda Roberts
Secretarial Supervisor

Kim Shipp
Secretary I

*Planner responsible for the preparation of this report.