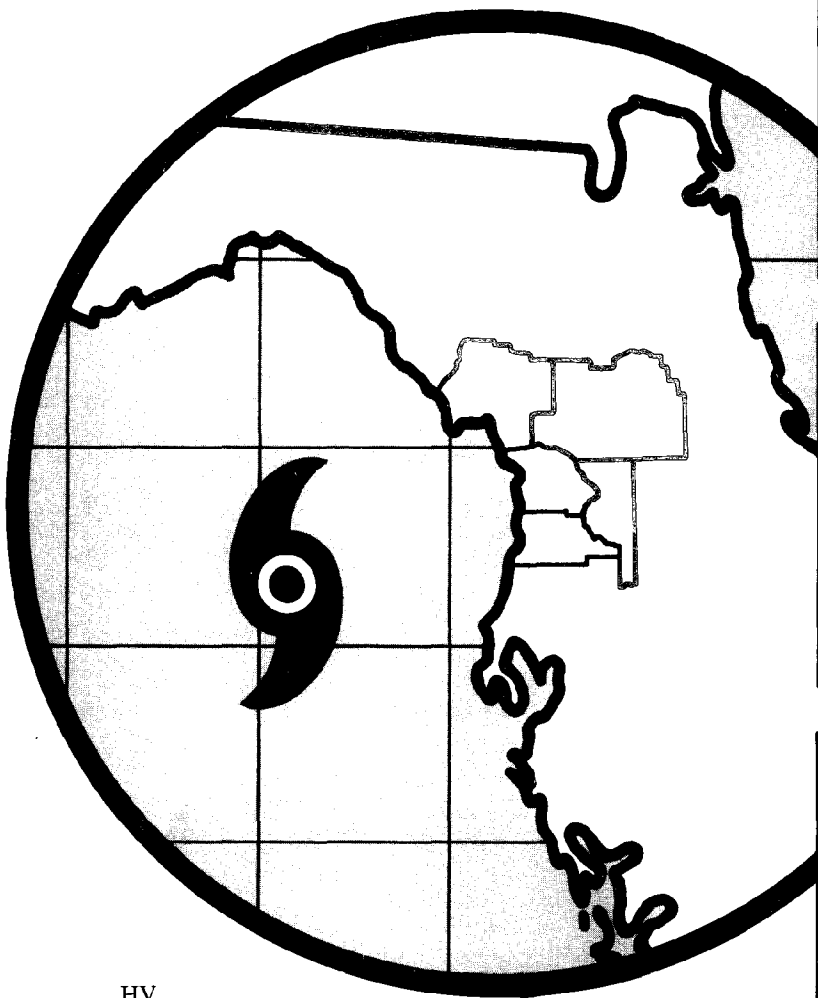
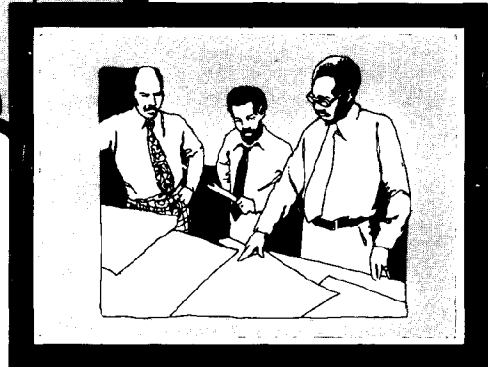


WITHLACOOCHEE REGIONAL PLANNING COUNCIL ANNOUNCEMENT



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Prepared by the WITHLACOOCHEE REGIONAL PLANNING COUNCIL
July, 1984

HURRICANE EVACUATION
DECISION MAKING GUIDE:
HERNANDO COUNTY

Prepared by the
Withlacoochee Regional Planning Council
July, 1984

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INTRODUCTION

As part of the Withlacoochee Hurricane Evacuation Plan, decision-making guides are to be furnished to each county in the region and the Florida Bureau of Emergency Management for use as a ready reference tool by decision-makers during the approach of the storm. The purpose of the guide is to provide information to assist local and state civil defense officials and other emergency management organizations to implement the critical actions necessary to prepare for, and respond to, a hurricane threat.

Basically, the guides consist of two parts. The first part is largely an excerpt from the technical data report prepared for the coastal counties of the region. This excerpt provides information on the expected number of evacuees, needed sheltering and evacuation times according to the forecasted intensity of the hurricane.

The second part is concerned with the coordination of the evacuation. This includes information on the roles and responsibilities of agencies involved in the issuance of the evacuation order and the management of the evacuation. The chapter on local coordination is largely excerpted from the Hurricane Annex of the Local Peacetime Emergency Plans in each county. The chapter on regional coordination is excerpted from the technical data report.

In addition, the coordination section includes a discussion of the implications of the findings of the technical data report on local evacuation decision-making.

Also, a quick reference guide is included which presents information on the expected number of evacuees and recommended evacuation order times according to several evacuation scenarios.

CHAPTER I

QUICK REFERENCE GUIDE

The purpose of this chapter is to provide local decision-makers with a quick reference guide as to the number of persons vulnerable to hurricane hazards in Hernando County and the recommended evacuation order times according to the forecasted intensity of the hurricane.

The population-at-risk and recommended evacuation order times are presented according to designated level of vulnerability. These levels of vulnerability are based on the forecasted hurricane intensity.

It should be noted that the remaining chapters in this document should be read prior to consulting this quick reference guide in order to gain familiarity with how these numbers were calculated.

Vulnerability Level 'A'^{1/}

Population-At-Risk

Surge-vulnerable residents: 5,738
Mobile-home residents: 12,940
Total: 18,678

Number requiring public shelter: 5,715

^{1/}See Map 1 and table 2 for definition of vulnerability levels.

Recommended Evacuation Order Times^{2/}

<u>Storm Type</u>	<u>Storm Intensity</u> ^{3/}	<u>Evacuation Time</u>
Exiting	1	12 Hours
Exiting	2	13
Paralleling	1	12
Paralleling	2	13
Paralleling	3	14.5
Paralleling	4	15.5
Normal	1	13
Normal	2	13.5

Vulnerability Level 'B'

Population-at-Risk

Surge-vulnerable residents: 13,370
Mobile-home residents: 12,227
Total: 25,597

Number requiring public shelter: 7,833

Recommended Evacuation Order Times

<u>Storm Type</u>	<u>Storm Intensity</u>	<u>Evacuation Time</u>
Normal	3	16.5 Hours
Normal	4	17.5
Normal	5	15.5

Vulnerability Level 'A' w/Tampa Bay

Population-At-Risk

If there is a concurrent Withlacoochee and Tampa Bay evacuation, population-at-risk figures increase as follows:

^{2/}Chapter IV, Evacuation Times should be consulted for possible timing adjustments.

^{3/}See table 1 and figure 1 for definition of storm types and intensities.

Total: 25,753

Number Requiring public shelter: 12,790

Recommended Evacuation Order Times

<u>Storm Type</u>	<u>Storm Intensity</u>	<u>Evacuation Time</u>
Exiting	1	30
Exiting	2	31
Paralleling	1	30
Paralleling	2	31
Paralleling	3	32.5
Paralleling	4	33.5
Normal	1	31
Normal	2	31.5

Vulnerability Level 'B' w/Tampa Bay

Population-At-Risk

Total: 30,554

Number Requiring Public Shelter: 12,790

<u>Storm Type</u>	<u>Storm Intensity</u>	<u>Evacuation Time</u>
Normal	3	33.5
Normal	4	34.5
Normal	5	32.5

Implications for Evacuation Decision-Making

Due to the long evacuation times required if there is an accompanying Tampa Bay evacuation, readiness conditions may have to be accelerated (see Chapter VII, Local Coordinative Mechanism). In addition, the amount of resources required to accommodate the expected number of evacuees may have to be increased.

CHAPTER II

EXTENT OF EVACUATION

The extent of the hurricane evacuation refers to the identification of those persons vulnerable to hurricane hazards in Hernando County and the calculation of this vulnerable population.

Identification of Vulnerable Population

There are primarily three hurricane hazards which necessitate or affect the evacuation of Hernando County: hurricane force winds, storm surge and rainfall.

Hurricane Force Winds

Hurricane force winds are defined as 74 mph or greater. A computer program called SPLASH, developed by the National Hurricane Center, was used to predict peak wind speeds resulting from hurricanes. The results indicated that peak wind speeds may vary from 84-174 mph, depending on storm type and intensity. Figure 1 and table 1 display the types and intensities of hurricanes used in the SPLASH program and their resultant wind speeds.

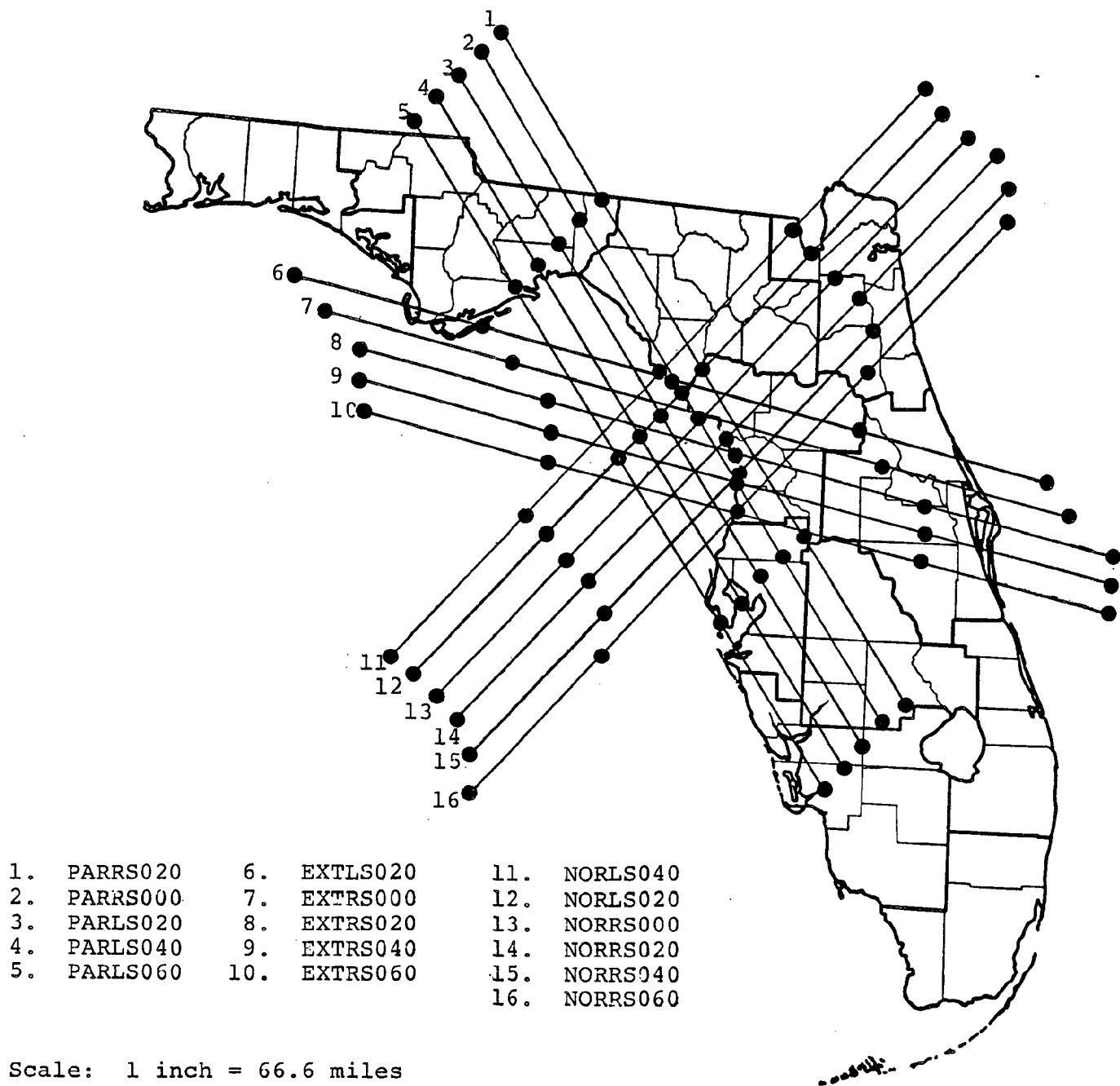
Mobile homes are particularly vulnerable to hurricane force winds because of their lightweight construction and flat sides and ends. Although local regulations require that mobile homes be anchored so as to withstand wind speeds in excess of 70 to 100 mph. In addition, mobile homes are more vulnerable to flying debris. As a result of this vulnerability to hurricane force winds, the National Weather Service recommends that all mobile home residents should evacuate in the event of a hurricane.

Storm Surge

The storm surge is the rising wall of ocean water, mainly produced by hurricane-force winds, which impacts upon coastal fringe areas. The storm surge is by far the most severe hurricane hazard. It causes 9 out of 10 hurricane-related deaths and possesses the greatest damage potential. A comparison of figure 1 with table 1 indicates that, of the hurricanes in the SPLASH model which affect Hernando County, peak surge heights are predicted to range from 4 to 24 feet, depending on storm type and intensity.

FIGURE 1

HYPOTHETICAL HURRICANE TRACKS*



Scale: 1 inch = 66.6 miles

*See table 1 for key to track identification.

TABLE 1

HURRICANES GENERATED BY SPLASH

Identification	Input Parameters				Direction (degrees clockwise from North)	Results	
	Pressure Drop (millibars)	Storm Speed (m.p.h.)	Radius Of Maximum Winds (miles)			Peak Surge Height (ft.)	Peak Wind Speed (m.p.h.)
NOR-01-LS040	30	15	20		45	9.6	86
NOR-01-LS020	30	15	20		45	11.6	86
NOR-01-RS000	30	15	20		45	11.6	86
NOR-01-RS020	30	15	20		45	9.8	86
NOR-01-RS040	30	15	20		45	8.7	86
NOR-01-RS060	30	15	20		45	7.4	86
NOR-02-LS040	40	15	20		45	13.0	99
NOR-02-LS020	40	15	20		45	15.6	99
NOR-02-RS000	40	15	20		45	16.0	99
NOR-02-RS020	40	15	20		45	12.9	99
NOR-02-RS040	40	15	20		45	11.8	99
NOR-02-RS060	40	15	20		45	10.0	99
NOR-03-LS040	60	15	20		45	19.6	121
NOR-03-LS020	60	15	20		45	23.6	121
NOR-03-RS000	60	15	20		45	24.2	121
NOR-03-RS020	60	15	20		45	20.2	121
NOR-03-RS040	60	15	20		45	17.9	121
NOR-03-RS060	60	15	20		45	15.2	121
NOR-04-LS040	80	15	20		45	26.4	140
NOR-04-LS020	80	15	20		45	31.8	140
NOR-04-RS000	80	15	20		45	32.6	140
NOR-04-RS020	80	15	20		45	27.2	141
NOR-04-RS040	80	15	20		45	24.2	140
NOR-04-RS060	80	15	20		45	20.5	140

TABLE 1 (cont.)

HURRICANES GENERATED BY SPLASH

Identification	Input Parameters				Direction (degrees clockwise from North)	Results	
	Pressure Drop (millibars)	Storm Speed (m.p.h.)	Radius Of Maximum Winds (miles)			Peak Surge Height (ft.)	Peak Wind Speed (m.p.h.)
NOR-05-LS040	100	15	12		45	24.8	174
NOR-05-LS020	100	15	12		45	26.0	172
NOR-05-RS000	100	15	12		45	33.1	172
NOR-05-RS020	100	15	12		45	29.2	174
NOR-05-RS040	100	15	12		45	23.6	174
NOR-05-RS060	100	15	12		45	21.4	174
PAR-01-LS060	30	15	20		120	8.2	86
PAR-01-LS040	30	15	20		120	8.3	86
PAR-01-LS020	30	15	20		120	8.0	86
PAR-01-RS000	30	15	20		120	7.3	82
PAR-01-RS020	30	15	20		120	5.2	73
PAR-02-LS060	40	15	20		120	11.1	99
PAR-02-LS040	40	15	20		120	11.2	100
PAR-02-LS020	40	15	20		120	11.0	99
PAR-02-RS000	40	15	20		120	10.1	95
PAR-02-RS020	40	15	20		120	7.3	86
PAR-03-LS060	60	15	20		120	16.8	122
PAR-03-LS040	60	15	20		120	17.1	122
PAR-03-LS020	60	15	20		120	15.7	122
PAR-03-RS000	60	15	20		120	15.8	118
PAR-03-RS020	60	15	20		120	11.5	108
PAR-04-LS060	80	15	20		120	22.6	141
EXT-01-LS015	30	15	20		165	5.2	84
EXT-01-RS000	30	15	20		165	5.7	84
EXT-01-RS015	30	15	20		165	4.0	86

TABLE 1 (cont.)

HURRICANES GENERATED BY SPLASH

Identification	Input Parameters				Results	
	Pressure Drop (millibars)	Storm Speed (m.p.h.)	Radius Of Maximum Winds (miles)	Direction (degrees clockwise from North)	Peak Surge Height (ft.)	Peak Wind Speed (m.p.h.)
EXT-01-RS030	30	15	20	165	3.9	86
EXT-01-RS045	30	15	20	165	3.6	86
EXT-02-LS015	40	15	20	165	7.4	99
EXT-02-RS000	40	15	20	165	8.0	98
EXT-02-RS015	40	15	20	165	5.7	99
EXT-02-RS030	40	15	20	165	5.5	99
EXT-02-RS045	40	15	20	165	5.1	99

Key for identification:

- o NOR - Path of hurricane normal or perpendicular to Gulf Coast
- PAR - Path of hurricane parallel to Gulf Coast
- EXT - Path of hurricane from point inland to Gulf Coast

01 to 05 - Hurricane intensity level based on Saffir/Simpson scale

LS, RS - Path of hurricane located to the left side or right side of Cedar Key, facing the Gulf Coast

000 to 060 - Distance of path of hurricane to the left or right from Cedar Key in miles

Source: SPLASH II computer output

Due to the severity of this hazard, all residents of areas subject to storm-surge flooding should evacuate. The approximate limits of the areas in Hernando County subject to this hazard are shown in map 1.

Vulnerability Levels. Each storm type and intensity listed in table 1 which affects Hernando County produces a different peak surge height. However, due to topographic changes in coastal areas, the extent to which the surge travels inland for several of these storm types and intensities does not change significantly. Therefore, these storm types and intensities are condensed into two vulnerability levels, as shown in table 2. The approximate geographic limits of these levels are shown in map 1.

Rainfall

Approximately 6 to 12 inches of rainfall can be expected to accompany a hurricane. However, the geographic distribution of this rainfall is difficult to predict prior to the arrival of the hurricane. Therefore, if heavy rains are predicted to accompany a hurricane, residents in areas subject to severe freshwater flooding should be prepared to evacuate in the event a hurricane warning is issued for their area.

Also, heavy rainfall can produce impedances in the evacuation process by causing difficult driving conditions. The effects of early rainfall on evacuation time are discussed in Chapter IV, Evacuation Times.

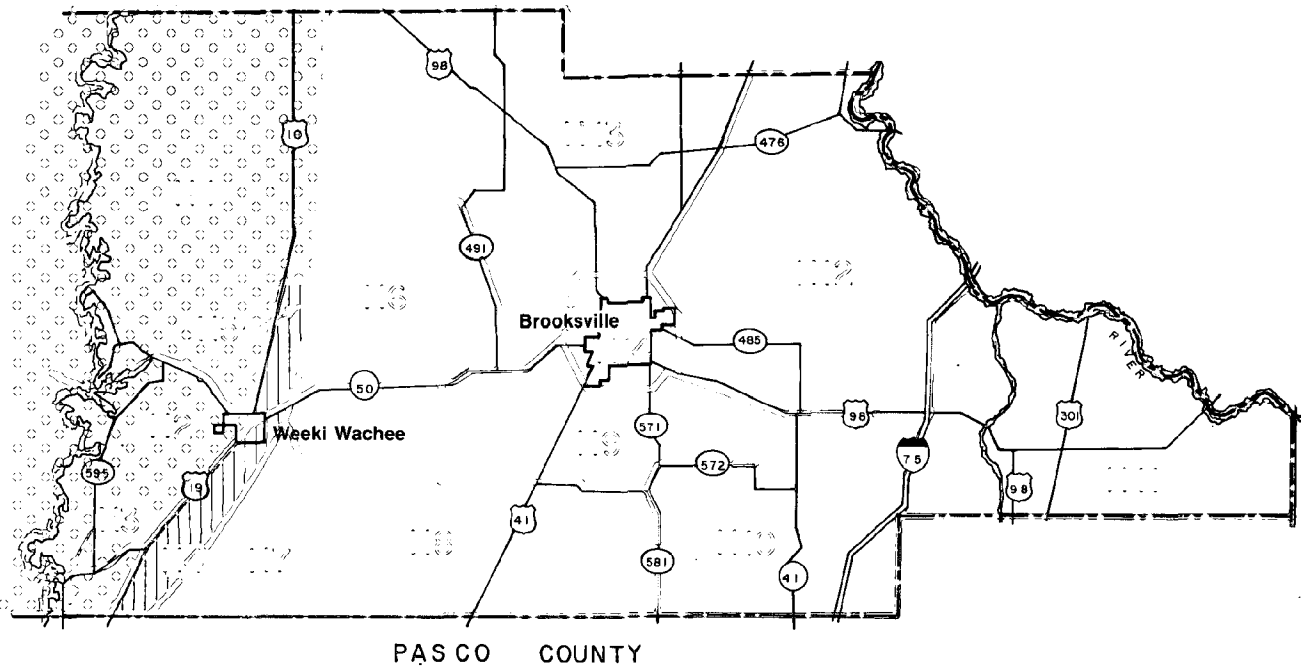
Population-At-Risk

The number of persons residing within the surge-vulnerable areas, as shown in map 1, and the number of mobile home residents outside these areas constitute the population-at-risk to hurricane hazards in Hernando County.^{1/} This is shown below by vulnerability level:

^{1/} The number of persons evacuating due to freshwater flooding should be relatively minor.

MAP 1

EVACUATION ZONES - HERNANDO COUNTY

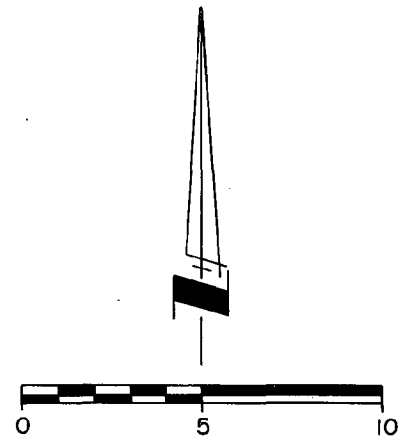


LEGEND

°°°°°°°°°° LEVEL "A" FLOODING

||||| LEVEL "D" FLOODING

HO EVACUATION ZONE NUMBER



Source: Post, Buckley, Schuh & Jernigan, Inc.

TABLE 2

VULNERABILITY LEVELS

<u>Storm Type</u>	<u>Storm Intensity^{1/} Category</u>	<u>Vulnerability^{2/} Level</u>
Exiting	1	A
Exiting	2	A
Paralleling	1	A
Paralleling	2	A
Paralleling	3	A
Paralleling	4	A
Normal	1	A
Normal	2	A
Normal	3	B
Normal	4	B
Normal	5	B

^{1/}Storm intensity category refers to the intensity level on the Saffir/Simpson scale.

^{2/}Vulnerability levels are inclusive meaning that vulnerability Level B includes all persons residing within the areas bounded by Vulnerability Levels A and B (see Map 1).

<u>Vulnerability Level</u>	<u>Population-At Risk</u>
A	18,678
B	25,597

The difference between vulnerability levels 'A' and 'B' is the number of non-mobile home residents in surge area 'B', as shown in Map 1.

Evacuation Destination Distribution

As part of the technical data for this plan, a statistically significant survey of hurricane response behavior was conducted in the Withlacoochee region.^{2/} One of the questions asked in the survey was the evacuation destination. The destinations were public shelter, friend or relative and hotel/motel.

Based on the results of this survey and discussions with the Regional Disaster Preparedness Advisory Committee, the following evacuation destination distribution was developed for the coastal counties:

<u>Evacuation Destination</u>	<u>Percentage of Population-At-Risk Seeking Destination</u>
Public Shelter	30.6%
Friend or Relative	40.6
Hotel/Motel	28.8

It should be noted that, for the hotel/motel destination, there is not sufficient hotel/motel capacity to accommodate the expected number of evacuees seeking this destination. Therefore, those evacuees unable to obtain a hotel or motel in Hernando County are assumed to seek such destinations outside the region.

Tampa Bay Evacuees

Based on a report prepared by the Florida Bureau of Emergency Management, approximately 30,000 evacuees from the Tampa Bay region are expected to enter the Withlacoochee Region via U.S. 41. Some evacuees will also enter the coastal counties via U.S. 301 and I-75. Of these evacuees, approximately 17,000 are expected to need public shelter.^{3/}

^{2/}Behavioral Surveys for the Withlacoochee Regional Disaster Preparedness Plan, H. W. Lochner, Inc., 1982.

^{3/}Report on the Expected Coastal Demand for Inland County Shelter Facilities from the Tampa Bay and Southwest Florida Regions, Florida Bureau of Emergency Management, 1982.

The number of Tampa Bay evacuees entering Hernando County will depend on available public shelter capacity in the coastal counties. According to the technical data report, if an evacuation order is issued for both the Tampa Bay and Withlacoochee regions, there are approximately 16,700 to 20,300 shelter spaces available in the coastal counties for incoming Tampa Bay evacuees, depending on the level of vulnerability. Assuming that through traffic from the Tampa Bay region heads toward I-75 (which may require the use of traffic control personnel), this means that approximately 16,700 to 20,300 evacuees or approximately 6,100 to 7,500 vehicles may enter Hernando County via U.S. 41.

The number of Tampa Bay evacuees seeking public shelter in Hernando County will depend on the available excess public shelter capacity. This varies from approximately 5,000 to 7,000 spaces, depending on the intensity of the storm.

Evacuation Routes and Zones

As part of a transportation model of a hurricane evacuation in the Withlacoochee region, the evacuation roadway network for each county was designated.^{4/} This network is displayed in map 2 for Hernando County.

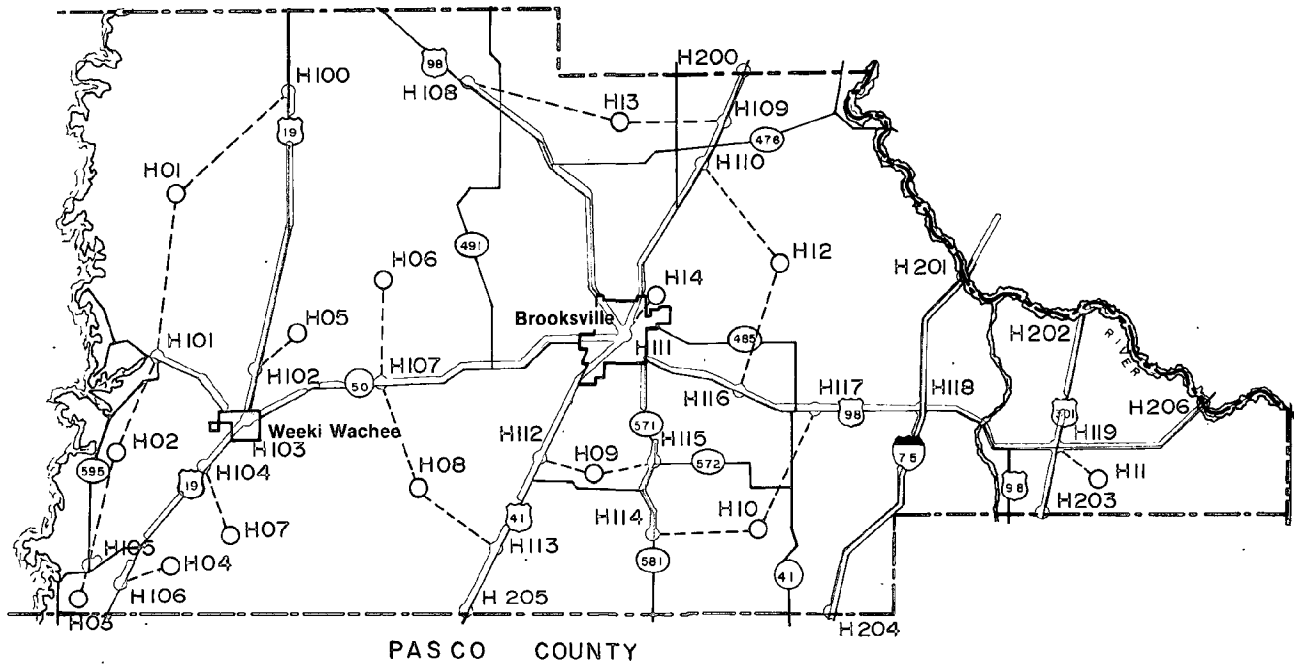
Another task of the transportation modeling effort was to divide the counties into evacuation zones. Zones were based on the roadway network and other easily identifiable boundaries.

These zones show the distribution of the population-at-risk within the county and thereby assists in the allocation of manpower and other resources within the county. Map 1 displays the evacuation zones developed for Hernando County. Appendix A provides a written description of these zones. Tables 3 and 4 show the distribution of the evacuation population and number of vehicles, broken out by evacuation destination, for vulnerability levels 'A' and 'B', respectively.

^{4/}Transportation Analysis: Withlacoochee Regional Hurricane Evacuation Plan, Post, Buckley, Schuh & Jernigan, August, 1983.

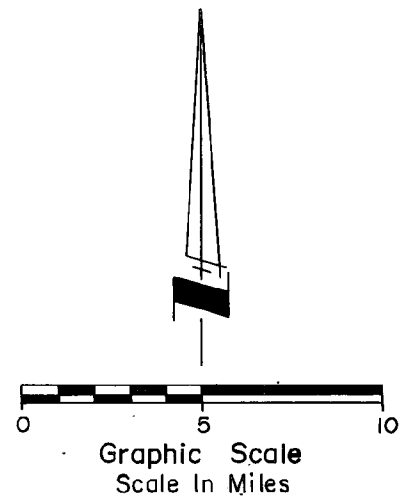
MAP 2

EVACUATION NETWORK - HERNANDO COUNTY



LEGEND

- STREET OR INTERSECTION LOCATION (NODE)
- EVACUATION ZONE CENTER (CENTROID)
- H114 NODE OR CENTROID NUMBER



Source: Post, Buckley, Schuh & Jernigan, Inc.

TABLE 3

HERNANDO COUNTY EVACUATING POPULATION AT RISK AND EVACUATING VEHICLES

Zone #	Evacuating Population	1	2	3	4	Evacuating Vehicles	1	2	3	4
Zone #H01	655	200	266	189	0	304	93	123	88	0
Zone #H02	2148	657	872	619	0	997	305	405	287	0
Zone #H03	2935	898	1192	845	0	1362	417	553	392	0
Zone #H04	545	167	221	157	0	253	77	103	73	0
Zone #H05	168	51	68	48	0	78	24	32	22	0
Zone #H06	4008	1226	1627	1154	0	1860	569	755	536	0
Zone #H07	58	18	23	17	0	27	8	11	8	0
Zone #H08	1058	324	430	305	0	491	150	199	141	0
Zone #H09	835	256	339	241	0	387	119	157	112	0
Zone #H10	847	259	344	244	0	393	120	160	113	0
Zone #H11	667	204	271	192	0	310	95	126	89	0
Zone #H12	1183	362	480	341	0	549	168	223	158	0
Zone #H13	1994	610	810	574	0	925	283	376	266	0
Zone #H14	1577	483	640	454	0	732	224	297	211	0
	18678	5715	7583	5380	0	8668	2652	3520	2496	0

1 = Red Cross Shelter
 2 = Friends Home
 3 = Hotel/Motel
 4 = Do Not Know

% Participation

per Mobile Home Unit

per Other Unit

Avg. Veh. per D.U.

Veh. Usage %

Dist. %: S=30.6 FR=40.6 HM=28.8 DK=0

Surge Zones H01, H02, H03

100

2.4

2.4

1.7

65.5

TABLE 4

HERNANDO COUNTY EVACUATING POPULATION AT RISK AND EVACUATING VEHICLES

Zone #	Evacuating Population	Evacuating Vehicles				1				2				3				4			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Zone #H01	655	200	266	189	0	93	123	88	0	93	123	88	0	93	123	88	0	93	123	88	0
Zone #H02	2148	657	872	619	0	305	405	287	0	305	405	287	0	305	405	287	0	305	405	287	0
Zone #H03	2935	898	1192	845	0	417	553	392	0	417	553	392	0	417	553	392	0	417	553	392	0
Zone #H04	6960	2130	2826	2004	0	988	1311	930	0	988	1311	930	0	988	1311	930	0	988	1311	930	0
Zone #H05	672	206	273	194	0	95	127	90	0	95	127	90	0	95	127	90	0	95	127	90	0
Zone #H06	4008	1226	1627	1154	0	569	755	536	0	569	755	536	0	569	755	536	0	569	755	536	0
Zone #H07	58	18	23	17	0	8	11	8	0	8	11	8	0	8	11	8	0	8	11	8	0
Zone #H08	1058	324	430	305	0	150	199	141	0	150	199	141	0	150	199	141	0	150	199	141	0
Zone #H09	835	256	339	241	0	119	157	112	0	119	157	112	0	119	157	112	0	119	157	112	0
Zone #H10	847	259	344	244	0	120	160	113	0	120	160	113	0	120	160	113	0	120	160	113	0
Zone #H11	667	204	271	192	0	95	126	89	0	95	126	89	0	95	126	89	0	95	126	89	0
Zone #H12	1183	362	480	341	0	168	223	158	0	168	223	158	0	168	223	158	0	168	223	158	0
Zone #H13	1994	610	810	574	0	283	376	266	0	283	376	266	0	283	376	266	0	283	376	266	0
Zone #H14	1577	483	640	454	0	224	297	211	0	224	297	211	0	224	297	211	0	224	297	211	0
	25597	7833	10393	7373	0	3634	4823	3421	0	3634	4823	3421	0	3634	4823	3421	0	3634	4823	3421	0

Surge Zones H01, H02, H03,
H04, H05

% Participation 100
Per Mobile Home Unit 2.4
per Other Unit 2.4
Avg. Veh. per D.U. 1.7
Veh. Usage % 65.5

1 = Red Cross Shelter
2 = Friends Home
3 = Hotel/Motel
4 = Do Not Know

CHAPTER III

PUBLIC SHELTER CAPACITY

Primary and Secondary Shelters

Primary shelters consist of the public schools in Hernando County located outside of the surge-vulnerable areas. These shelters will be opened and used first in the evacuation process. Table 5 presents the capacity of the primary public shelters in Hernando County.

Secondary shelters consist of churches and other civic buildings located outside of the surge-vulnerable areas. These shelters will only be opened if there is insufficient primary shelter capacity to accommodate the evacuees. Table 6 presents the capacity of the secondary public shelters in Hernando County which were inventoried for the technical data report.^{1/}

Table 7 displays the public shelter demand and capacities for each of the coastal counties. It can be seen that there is more than adequate primary shelter capacity to accommodate the expected number of Hernando County evacuees. However, if an evacuation order is issued for both the Tampa Bay and Withlacoochee regions, all the primary and secondary shelter capacity in Hernando County may have to be utilized. The implications of a Withlacoochee and Tampa Bay evacuation on evacuation times are discussed in the next chapter.

Shelter Duration Periods

The shelter duration period is defined as the minimum period of time in which evacuees must remain in their evacuation destination until the hurricane passes. This is defined as the period of time before and after the occurrence of gale force winds (39 - 73 mph). Gale force winds are assumed to create hazardous conditions due to flying debris. These times were calculated from the results of the SPLASH model and are displayed in table 8 for each hurricane type and intensity.

^{1/}It should be noted that the list of secondary shelters was developed for the regional hurricane evacuation plan. Shelter agreements need to be established for the opening and operation of these shelters during a hurricane evacuation.

TABLE 5

HERNANDO COUNTY PRIMARY SHELTER CAPACITY

	<u>Shelter Name</u>	<u>Address</u>	<u>Capacity</u> ^{1/}
(H1)	Mitchell L. Black Elementary School	Kelly St. & Bell Ave. Brooksville, FL	1,402
(H2)	Eastside Elementary School	Hill 'n Dale Subdivision Brooksville, FL	1,041
(H3)	Hernando High School	Kelly St. & Bell Ave. Brooksville, FL	666
(H4)	D. S. Parrott Jr. High School	Kelly St. & Bell Ave. Brooksville, FL	2,122
(H5)	Spring Hill Elementary School	3901 Roble Ave. Spring Hill, FL	453
(H6)	Springstead High School	1615 Mariner Blvd. Spring Hill, FL	2,275
(H7)	West Hernando Jr. High School	2574 Fox Chapel Ln. Spring Hill, FL	1,167
(H8)	Westside Elementary School	715 Applegate Dr. Spring Hill, FL	1,892
	TOTAL		11,018

^{1/}Based on 20 square feet of usable shelter space/person.

Source: Hernando County School Board.

TABLE 6

HERNANDO COUNTY SECONDARY SHELTER CAPACITY

	<u>Shelter Name</u>	<u>Address</u>	<u>Capacity</u>
(H9)	Brooksville Christian	Barnett Rd. & Windy Way Brooksville	120
(H10)	Christ Lutheran Church	W. North Ave. & Zoller St. Brooksville	200
(H11)	Eden Baptist Church	E. S.R. 476 & S.R. 481 Brooksville	200
(H12)	First Baptist Church	420 W. Howell Ave. Brooksville	1,000
(H14)	First Presbyterian Church	300 Bell Ave. Brooksville	500
(H15)	Gulf Ridge Park Baptist Church	713 Manecke Rd. Brooksville	400
(H16)	Northside Baptist Church	U.S. 41 & S.R. 45A Brooksville	400
(H17)	Pentecostal Church of God	Russell St. & Main St. Brooksville	80
(H18)	St. Anthony Catholic Church	S.R. 577 & U.S. 41 Brooksville	314
(H19)	St. Johns Church	S. Brooksville Ave. & Virginia Ave., Brooksville	40
(H20)	All Faiths Community Church	W. S.R. 40 & U.S. 301 Ridge Manor	80
(H21)	Grace United Presbyterian Church	2106 Spring Hill Drive Spring Hill	160
(H22)	First United Methodist Church of Spring Hill	2600 Spring Hill Drive Spring Hill	170
	TOTAL		3,664

TABLE 7
NET SHELTER CAPACITY

<u>Levy County</u>						
<u>Primary Shelter Capacity</u>		<u>Secondary Shelter Capacity</u>		<u>Shelter^{1/} Demand</u>		<u>Net Shelter Capacity</u>
5,801	+	2,999	-	4,259	=	4,541
<u>Citrus County</u>						
13,110	+	3,056	-	8,954	=	7,212
<u>Hernando County</u>						
9,126	+	3,664	-	7,833	=	4,957
<u>Coastal County Total</u>						
28,037	+	9,719	-	21,046	=	16,710
<u>Coastal County Total Plus Tampa Bay Evacuees</u>						
28,037	+	9,719	-	37,839	=	-83

Sources: WRPC Staff analysis.

Report on Expected Coastal Demand for Inland County Shelter Facilities from the Tampa Bay and Southwest Florida Regions, Florida Bureau of Disaster Preparedness.

NOTES: ^{1/} Based on worst case surge vulnerability.

It should be noted that these are minimum shelter duration periods and that actual shelter duration periods may have to be increased depending on the results of the storm.

CHAPTER IV

EVACUATION TIMES

Evacuation times consist of three components: pre-landfall hazard time, behavioral response time and clearance time.

Pre-landfall hazard time is the number of hours before the eye of the storm strikes or makes its closest point of approach in which gale force winds occur. It is assumed that evacuation must be completed before the occurrence of gale force winds due to the potential of hazardous driving conditions. Pre-landfall hazard times are presented in table 8 for each storm type and intensity.

Behavioral response time is the amount of time it takes for the vulnerable population to respond to the evacuation order. These times were based on the survey of hurricane response behavior conducted in the Withlacoochee region and previous evacuation studies and were calculated as part of the transportation model.

Clearance time is the amount of travel time it takes for the vulnerable population to reach their evacuation destinations. This time was calculated as a part of the transportation model developed for the Withlacoochee region.^{1/}

Evacuation time is the sum of these components. Tables 9 and 10 display the evacuation times by each level of vulnerability for each county in the Withlacoochee region. It can be seen that evacuation times are greatly increased in some counties, if both the Withlacoochee and Tampa Bay regions are issued an evacuation order.

^{1/}Clearance time is calculated by determining which link in the evacuation roadway network, displayed in Map 2, is the most congested during the evacuation process. This is called the "critical link". The amount of time it takes for the last vehicle to "clear" this link is the clearance time. Appendix B presents the distribution of traffic on the roadway network in Hernando County according to the evacuation scenarios developed for this report. The critical links are denoted with an asterisk.

TABLE 8

GALE FORCE WIND ANALYSIS AND SHELTER DURATION PERIOD
BY STORM TYPE AND INTENSITY

<u>Storm Type</u>	<u>Storm Intensity</u>	<u>Pre-landfall Hazard Time</u>	<u>Shelter Duration Period</u>
Normal	5	7.0 ^{1/}	12.0 ^{1/}
Normal	4	9.0	15.0
Normal	3	8.0	14.0
Normal	2	6.0	11.0
Normal	1	5.5	9.5
Paralleling	4	8.0	17.0
Paralleling	3	7.0	15.0
Paralleling	2	5.5	11.0
Paralleling	1	4.5	9.0
Exiting	2	5.5	13.0
Exiting	1	4.5	12.0

^{1/}Pre-landfall hazard time and shelter duration period for storm intensity category five are shorter due to a narrower radius of maximum winds

Source: SPLASH II computer output.

TABLE 9

EVACUATION TIMES (in hours)

VULNERABILITY LEVEL 'A'

	Response Curve	REGIONAL VULNERABILITY LEVEL	
		A	A w/Tampa Bay Evacuation
Levy County	A-Quick Response	8 3/4 - 12 1/4	8 3/4 - 12 1/4
	B-Medium Response	11 3/4 - 15 1/4	11 3/4 - 15 1/4
	C-Slow Response	14 3/4 - 18 1/4	14 3/4 - 18 1/4
Citrus County	A-Quick Response	12 1/4 - 15 3/4	12 1/4 - 15 3/4
	B-Medium Response	14 - 17 1/2	14 - 17 1/2
	C-Slow Response	16 - 19 1/2	16 - 19 1/2
Hernando County	A-Quick Response	8 3/4 - 12 1/4	29 1/2 - 33
	B-Medium Response	12 - 15 1/2	24 - 27 1/2
	C-Slow Response	15 - 18 1/2	30 3/4 - 34 1/4
Marion County	A-Quick Response	9 1/2 - 13 1/2	22 1/2 - 26
	B-Medium Response	12 1/2 - 16	24 - 27 1/2
	C-Slow Response	15 1/2 - 19	25 1/2 - 29
Sumter County	A-Quick Response	9 - 12 1/2	22 1/2 - 26
	B-Medium Response	11 3/4 - 15 1/4	24 - 27 1/2
	C-Slow Response	14 1/2 - 18 1/4	25 1/2 - 29

SOURCE: Post, Buckley, Schuh & Jernigan, Inc. and WRPC Staff.

TABLE 10

EVACUATION TIMES (in hours)

VULNERABILITY LEVEL 'B'

REGIONAL VULNERABILITY LEVEL			
Response Curve	B	B w/Tampa Bay Evacuation	
Levy County			
A-Quick Response	10 3/4 - 13 3/4	11 3/4 - 14 3/4	14 3/4
B-Medium Response	14 1/4 - 16 1/4	14 1/4 - 16 1/4	16 1/4
C-Slow Response	17 1/4 - 19 1/4	17 1/4 - 19 1/4	19 1/4
Citrus County			
A-Quick Response	16 1/4 - 18 1/4	16 1/4 - 18 1/4	18 1/4
B-Medium Response	18 - 20	18 - 20	20
C-Slow Response	20 - 22	20 - 22	22
Hernando County			
A-Quick Response	15 1/4 - 18 1/4	32 - 34	1/2
B-Medium Response	15 1/4 - 17 1/4	32 1/2 - 34	1/2
C-Slow Response	17 1/2 - 19 1/2	33 1/4 - 35	1/4
Marion County			
A-Quick Response	12 - 14	25 1/4 - 27	1/4
B-Medium Response	15 - 17	26 3/4 - 28	3/4
C-Slow Response	18 - 20	28 1/4 - 30	1/4
Sumter County			
A-Quick Response	11 1/2 - 13 1/2	25 - 27	
B-Medium Response	14 1/4 - 16 1/4	26 1/2 - 28	1/2
C-Slow Response	17 1/4 - 19 1/4	28 - 30	

SOURCE: Post, Buckley, Schuh & Jernigan, Inc. and WRPC Staff

Timing Adjustments

Evacuation Order Adjustment. The behavioral response time includes response time before and after the evacuation order is issued. The amount of response time before the evacuation order is issued should be subtracted from the evacuation times listed in tables 9 and 10 in order to arrive at the minimum evacuation order time. These adjustments are as follows:

<u>Behavioral Response</u>	<u>Change in Evacuation Time</u>
A (quick)	subtract 1 hour
B (medium)	subtract 2 hours
C (slow)	subtract 3 hours

Early Arrival of Rainfall. The evacuation times set forth in this report include the number of hours before eye landfall (pre-landfall hazard time) when ambient high winds might prevent evacuation from being carried out. However, depending on the structure, size, or forward speed of the storm, hurricane-induced rainfall may precede this point in time. Historically, rainfall has occurred as late as two hours before eye landfall and as early as twenty hours before eye landfall. Such rainfall would reduce roadway carrying capacity because of limited driver visibility and wet pavement. This reduction has been estimated at approximately fifteen percent in past transportation studies. This adjustment requires a monitoring of the forecasted arrival of rainfall by the local weather service office radar. If the arrival of rainfall is forecasted substantially before the pre-landfall hazards time an amount of time equal to about fifteen percent of the clearance time should be immediately added to the evacuation time. The clearance time is the overall evacuation time minus the pre-landfall hazards time.

Based on the above, the following are the changes in evacuation time according to behavioral response:

<u>Behavioral Response</u>	<u>Change in Evacuation Time</u>
A	add 1.5 hours
B	add 1.5 hours
C	add 2 hours

Changes in Hurricane Parameters. Certain variables were used to predict wind speeds in the SPLASH model. If, according to the monitoring of the storm before landfall, these variables are different, the arrival of gale force winds could change and thereby affect pre-landfall hazard times.

The parameters in the SPLASH model which can affect the arrival of gale force winds and thereby pre-landfall hazard times are the forward speed of the storm and the radius to maximum winds. As the storm speed increases, there is less time required for the arrival of gale force winds, thereby reducing pre-landfall hazard time. As the radius-to-maximum winds increases, gale force winds arrive sooner, thereby increasing pre-landfall hazard times.

In order to ascertain the sensitivity of pre-landfall hazard times to the aforementioned, additional SPLASH program runs were made. Forward speed and radius-to-maximum winds were independently varied in each additional run. The results are presented and explained in table 11.

Unpredictable Road Blockages. The intensity of traffic during a hurricane evacuation will always be accompanied by a certain number of traffic accidents and breakdowns. Although roadway shoulders are available for vehicles in distress, the movement of such vehicles to these areas is often difficult and disruptive. It is recommended that at least two traffic control personnel be positioned at each key roadway link so that one can assist disabled vehicles as needed. A tow vehicle should also be positioned at each critical link to facilitate the removal of immobilized vehicles. Those roadways that historically experience flooding due to rainfall alone should be monitored for vehicle distress and help.

To guard against an unpredictable, and thus unquantifiable blockage of evacuation routes that could add to the overall evacuation time, a safety margin of up to two hours will be added to the evacuation times. Such unpredictable blockages could include: disabled vehicles, traffic accidents and fallen trees or other debris.

Recommended Evacuation Times. It is recommended that a medium behavioral response be used in determining the evacuation order time. It is also recommended that two hours be added to the evacuation time to account for unpredictable road blockages. Other adjustments in evacuation times should be made as necessary according to the previously mentioned adjustment factors.

TABLE 11

SENSITIVITY ANALYSIS OF PRE-LANDFALL
HAZARD TIMES

<u>Storm Speed</u>		
<u>Intensity Level</u>	<u>Change in Storm Speed</u>	<u>Change in Hazard Time</u> ¹
1	+15 mph	-1.5 hrs.
2	+15	-2.0
3	+15	-4.0
4	+15	-4.0
5	+15	-3.0

<u>Radius to Maximum Winds (RMW)</u>	
<u>Change in RMW</u>	<u>Change in Hazard Time</u> ^{2/}
-10	-2
+10	+2
+20	+4
+30	+6

^{1/}Changes in pre-landfall hazard times for other changes in storm speed can be determined from this table. For example, if the storm speed is forecasted 10 mph greater than the storm speed used in the SPLASH model, which is 15 mph, the resultant change in storm speed is proportional. The hazard times will increase only if the forecasted storm speed is less than 15 mph.

^{2/}Generally there is a 2 hour change in hazard time for every 10 mile change in RMW. The RMW used in the SPLASH model are shown in table 1.

SOURCE: SPLASH II computer printouts prepared by the National Hurricane Center.

Based on the above recommendations, the following are recommended evacuation order times according to level of vulnerability:

<u>Vulnerability Level</u>	<u>Recommended Evacuation Time</u>
A	12 to 15.5 hours ^{2/}
B	15.5 to 17.5 hours

These times represent minimum evacuation order times, excluding other adjustment factors. These times should be adjusted, using these factors, according to forecasted hurricane conditions.

Implications for Evacuation Decision-Making

As can be seen in tables 9 and 10, evacuation times are greatly increased if there is a concurrent Tampa Bay and Withlacoochee evacuation. This means that readiness conditions may have to be accelerated. For example, readiness procedures that normally take place at 12 hours before landfall may have to be moved up to the recommended evacuation order time.

The effects of evacuation times on local preparedness activities are further discussed in Chapter VII, Local Coordinative Mechanism.

^{2/}The difference in evacuation times for each vulnerability level are accounted by changes in storm intensity for each level. Recommended evacuation order times are presented by storm intensity in Chapter I, Quick Reference Guide.

CHAPTER V

WARNING INFORMATION

Warning information refers to the flow of information on the need for hurricane evacuation from the National Hurricane Center to the general public. The purpose of this chapter is not to propose a new method for the dissemination of warning information, but rather to explain the existing system.

Agency Participants and Warning Process

The following are the principal Federal, State and local governmental agencies involved in the warning system:

- National Hurricane Center, Miami
- Tampa Area Office, National Weather Service, Ruskin
- Florida Bureau of Emergency Management, Tallahassee
- Central Florida Area Office, Florida
(Bureau of Emergency Management, Wildwood)
- Hernando County Board of Commissioners
- Hernando County Civil Defense Department
- Public Media (TV/Radio)

The warning process is initiated by the National Hurricane Center and reaches the public through the following five-step procedure:^{1/}

1. A potential hurricane picked up in satellite images is usually the subject to the first in a series of advisory messages issued by the National Hurricane Center at six hour intervals (5 and 11 A.M. and P.M., Eastern Standard Time). These early advisories are aimed mainly at shipping and aviation interests. When the storm intensifies further into a tropical storm, it is given a name.
2. If the hurricane or tropical storm approaches land, the advisory information begins to focus on coastal and inland effects.

^{1/}The following information was taken from the Pinellas County Hurricane Implementation Guide, prepared by the Tampa Bay Regional Planning Council, June, 1981.

- A Hurricane Watch announcement becomes part of the NHC advisories when the storm threatens coastal and inland areas. This Watch covers a specified area and period of time and means that hurricane conditions are a real possibility.
 - A Hurricane Warning is added to the advisory when hurricane conditions, winds of at least 74 miles per hour, high water and storm tides, are expected within a period of up to 24 hours. The Warning identifies coastal areas where these conditions are expected to occur.
3. As the threat to coastal areas becomes more apparent, the advisories are then interspersed with intermediate advisories every three hours or as needed.
 4. Once a hurricane becomes a threat to the Withlacoochee Region, then the Tampa Area office of the National Weather Service will add local statements to each NHC advisory and intermediate advisories. The local statements will consist of recommendations for precautionary actions and completion times, existing conditions of wind and tides, information regarding projected storm tides confronting counties of the region.
 5. All normal warning information will be provided to the general public through the media (radio/TV) by the NHC and when necessary, local government.

The warning information provided by the hurricane advisories, intermediate advisories and local statements will be used as a basis to alert local officials and disaster organizations of any potential hurricane threat. These warnings are augmented by restricted information to local governments also furnished by the NHC to assist those governments in preparation and evacuation decision-making. This restricted information is normally received over the National Warning System (NAWAS) by the Department of Civil Defense, or, when activated, the Hernando County Emergency Operations Center (EOC).

On the basis of the aforementioned warning procedure, the Governor of Florida is advised by the State Bureau of Disaster Preparedness to issue an evacuation order for the affected local area;^{2/} or, the chief elected official of each affected local political jurisdiction may issue the evacuation order, as advised by its disaster preparedness agency or committee.

^{2/}See appendix C for the chain of legal authority to issue an evacuation order.

The Central Florida Area Office will serve as the lead agency for coordinating an interregional evacuation, which is described in Chapter VI, Regional Coordinative Mechanism.

Local disaster preparedness agencies and other agencies; such as fire districts, Red Cross and Sheriffs Departments will be the key agencies in carrying out the evacuation. Agency involvement and specific evacuation procedures are discussed in Chapter VII, Local Coordinative Mechanism.

The following is a chronological summary of key warning conditions, based on the above information, in relation to the number of hours before projected hurricane eye landfall or closest point of approach:

- 72 hour advisory: storm assigned Category number on Saffir/Simpson Scale by NHC
- 48 hours before projected eye landfall: local areas placed under hurricane watch condition by NHC
- 24 hours before projected eye landfall: local areas placed under hurricane warning condition by NHC
- 12-24 hours before projected eye landfall: local area advised to evacuate by NHC advisory or local NWS office Local Action Statement
- Governor advised by Bureau of Emergency Management to issue an evacuation order for the local area or Executive Group, Hurricane Evacuation Committee advised by its control group to issue an evacuation order for the jurisdiction.^{3/} The local evacuation order should be issued according to the recommended evacuation order times in this guide.

^{3/}The composition of the executive and control groups is described in Chapter VII, Local Coordinative Mechanism.

CHAPTER VI

REGIONAL COORDINATIVE MECHANISM

Regional Evacuation Scenarios

For purpose of this report, "regional" is defined as affecting more than one county. Accepting this definition, the hurricane is definitely a regional event. This is not only because its hazards can affect a relatively large area, but also due to the error in prediction as to where the hurricane will strike, or make its closest point of approach (CPA) during the hurricane warning period, typically 12 to 24 hours before CPA. It is possible that up to a 250-mile "warning area" along the coast may occur during the warning period due to this error in prediction. Therefore, it is possible that, for example, both the Withlacoochee and the Tampa Bay regions may fall under this "warning area" and, hence, have to be evacuated.

It should be further noted that the rate of reduction of hurricane-force winds after the hurricane makes its closest point of approach is largely unpredictable. Therefore, it is assumed that the mobile-home residents in the inland counties will have to evacuate regardless of the type or intensity of the hypothetical hurricane tracks modeled in the SPLASH computer model, should an evacuation order be issued for the inland counties.

Based upon the above information, three regional evacuation scenarios have been designated for purposes of this report. They are as follows:

- Regional Scenario A: includes all of the residents within the evacuation zones associated with Vulnerability Level 'A' in the coastal counties, the mobile-home residents in the remainder of the coastal counties and the mobile-home residents in the inland counties.
- Regional Scenario B: includes all of the residents within the evacuation zones associated with Vulnerability Levels A and B, the remainder of the coastal mobile-home residents and inland mobile-home residents.

- Regional Scenario C: includes all of the residents in Regional Scenario B and the number of persons entering the Withlacoochee region from the Tampa Bay region, based on the worst-case regional evacuation scenario for the Tampa Bay region.

The aforementioned scenarios do not cover all the possibilities in that it is possible that, for example, only the northern counties of Levy and Marion need be evacuated should the "warning area" be further to the north. The same applies to the southern counties of Citrus, Sumter and Hernando; should it be further to the south. It is also possible that, for example, the Tampa Bay region may be evacuated without any of the counties in the Withlacoochee region evacuated. Thus, the regional scenarios should be viewed as worst-case planning possibilities, based on currently available information.

The population-at-risk for each regional scenario is shown below:

<u>Regional Scenario</u>	<u>Population-At-Risk</u>
A	98,742
B	112,232
C	255,742

Implications for Evacuation Decision-Making

The implications of the regional evacuation scenarios for evacuation decision-making in Hernando County are primarily in regard to accelerating readiness conditions due to increased evacuation times and the possible need for additional manpower and other resources necessary to accommodate Tampa Bay evacuees.^{1/} Since the public shelter capacity in most of the other counties appears to be sufficient, there should be no evacuees from other counties in the Withlacoochee region entering Hernando County.

^{1/}The procedures for obtaining any needed additional resources for the evacuation is addressed in the next section and in Chapter VII, Local Coordinative Mechanism.

Regional Coordination

Lead Agency

To effectively coordinate a regional response to a hurricane emergency, a lead agency must be designated to provide a linkage among the organizational participants. The lead agency must have jurisdiction over a multi-county area, and possess sufficient expertise, staff and funding to effectively manage the evacuation. A reliable communication system is also crucial for the overall coordination of the evacuation.

It is proposed that the Central Florida Area Office for the Bureau of Disaster Preparedness (CEFA) located in Wildwood, be designated as the lead agency for interregional evacuation management. While other entities were considered for designation as lead agency, CEFA appears to be best qualified for terms of the criteria mentioned above. (See Figure 2.)

As the lead agency with overall responsibilities for coordination in the Withlacoochee Region, CEFA will serve as the focal point for the flow of information on hurricane warnings, evacuations and shelter openings.

Regional Entities

Organizations that will be involved at the regional level include the Florida Highway Patrol, the Red Cross and the Health and Rehabilitative Services Department. The FHP maintains traffic control and maintains the progress of the evacuation. Continuous communication with the regional EOC will provide up-to-the-minute information on the evacuation and thereby improved decision-making during the emergency. The Red Cross will be involved at the regional level in the opening and staffing of shelters. The regional office of the Red Cross would assist in areas without a local Red Cross Chapter. The State Department of HRS provides manpower assistance to the Red Cross should insufficient personnel be available for staffing of hurricane shelters.

Procedures for Implementation of Interregional Evacuation Plan

To be effective, the plan for interregional evacuation must contain a coordinative mechanism to establish procedures for the opening of shelters and reception sites in coordination with evacuation movements. The proposed procedures for implementation of the interregional plan are described below for each phase of the hurricane emergency.

Normal Conditions

Representatives of the participating agencies involved in the plan will meet on a regular basis to enhance ongoing coordination among the agencies and identify problems with the implementation of the plan.

This group should meet as a permanent committee, and focus on the regional aspects of hurricane planning and operations. Activities of the committee may include:

- testing of the plan
- review of the institutional arrangements for coordination
- improvement of public awareness of hurricane hazards
- exchange information on ways to improve disaster response and recovery.

Emergency Conditions

As a hurricane develops and threatens land areas, the National Hurricane Center will issue a hurricane watch twenty four to forty-eight hours before landfall. This alerts threatened areas to potential storm conditions. A hurricane warning should be issued according to the recommended evacuation order times in this report. These warnings are issued to the State Bureau of Emergency Management as well as county civil defense offices.

Post Emergency Conditions

As the hurricane hazard recedes from the region, the Area Coordinator should continue to act as the liaison between coastal and inland counties. Information on when it is safe to return to effected areas can be transmitted to the inland county civil defense offices. The Area Office should also assist where ever possible in an expedient and effective disaster recovery process.

After recovery has been completed, the interregional committee should meet to evaluate the plan as implemented and identify any problems that may have occurred.

Public Notification

During non-emergency periods, public information and education is disseminated by various agencies through news releases, news features, and radio and television programs. Such activity serves to increase awareness of emergency preparedness programs and provides the citizens with a knowledge of the basic precautions necessary during an emergency.

During emergency periods, it is necessary to provide the public with clear, concise, and timely information and instructions to the general public. It is important that one single agency in each jurisdiction be designated as the sources of public information in an emergency. This will avoid the issuance of conflicting reports and provide a continuous flow of information regarding governmental decisions, recommendations and instructions. Public notification and instructions will be issued by the civil preparedness agency within each respective jurisdiction. This information should be disseminated after consultation and coordination with the Central Florida Area Office, Bureau of Emergency Management.

While primary responsibility for public notification is conferred to the respective civil preparedness agencies, it is suggested that the procedures below be incorporated into the public notification process to improve interregional coordination. These suggestions are divided into three phases: normal, emergency, and post emergency conditions.

Normal

Public information materials developed as part of the Regional Hurricane Evacuation Plan (and prepared by the Regional Planning Council) should be disseminated to coastal and inland residents. This material will educate the public on hurricane hazards, and provide instructions based on the findings of the inland shelter study. The material will identify the sources of further information and assistance during the emergency phase.

Emergency

It is suggested that as the emergency approaches, an emergency public information officer be activated to act as the only official sources of public information for that jurisdiction. This officer should be pre-designated and in constant communication with the National Hurricane Center, surrounding EOC's and CEFA.

Evacuation and sheltering instructions on cassette tapes or radio scripts which have been prepared beforehand can be disseminated at this time. In the print media, area newspapers could print hurricane supplements which have been prepared in cooperation with the civil preparedness agency.

Post Emergency

In this phase the public information officer should continue to be the official source of public information and should receive information from various service agencies for dissemination to the public. The officer should assist State and Federal officers in local dissemination of information concerning their programs.

Personnel for Reception Centers and Shelters

Assignment and notification of personnel to emergency facilities is the responsibility of the county civil defense director. The mobilization of emergency personnel will follow the issuance of an evacuation order. Through consultation with CEFA, the civil defense director should have a good idea of the timing and scope of the evacuation in coastal areas. He may then mobilize county resources to the required level.

To ensure that shelters and reception centers are properly staffed in an emergency, it is suggested that procedures be established for assignment and notification of personnel. These procedures should be developed as part of a plan of action that is consistent with the regional plan and relevant to the needs and resources of the county.

Suggested Plan of Action

Key members of county government, the Red Cross and other agencies should meet with the civil defense director as a group to establish the roles and responsibilities of the participants. A plan of action can be devised to acquaint each member with the duties that his organization is expected to perform.

The group or committee is put on call with the issuance of the hurricane watch. Key members of the committee (those in charge of a county division for example) would meet with the civil defense officer to review plans, and determine readiness of equipment, supplies and personnel.

Several hours prior to the recommended evacuation order times, the key personnel would activate their departmental or agency emergency plans, and alert and maintain communications with personnel. As evacuations are announced, the committee would monitor the situation and respond to instructions from the civil defense officer.

Prior to the recommended evacuation order times, the EOC should be fully operational with each participant performing assigned duties and tasks. Emergency operations would be in full swing and involve several different areas:

- communication with the Red Cross for shelter openings
- broadcast of hurricane precautions
- communications with public utilities
- law enforcement: patrols, road blocks, rescues
- coordination of emergency services and needs

With the onslaught of the hurricane, activities in the affected areas are halted. The progress of the storm and emergency operations are monitored at the EOC.

After the danger has passed, post disaster operations will be initiated. A written report and evaluation should be provided to the civil defense officer.

CHAPTER VII

LOCAL COORDINATIVE MECHANISM

The following information is extracted from the Hernando County Peacetime Emergency Plan. Some revisions have been made on the plan of action, using the recommended evacuation order times.^{1/} The sections on shelter assignments and traffic control points are extracted from the technical data report.

I. INTRODUCTION

A. Purpose

To assign responsibilities and establish procedures for governmental and volunteer agencies and individuals in preparing for and executing evacuation of designated areas of Hernando County. This plan is intended to augment, not to replace the existing Natural Disaster Plan when an extremely dangerous hurricane approaches Hernando County. The primary objective of this plan is the relocation of coastal residents, residents of mobile home parks and residents of low-lying areas, subject to flooding, to places of safety and to provide maximum warning time possible to the residents of those areas which are deemed to be in danger.

B. Scope

To provide an effective means for mass evacuation of all lands subject to inundation by tidal action; of low-lying areas subject to flooding and of mobile home parks.

C. Assumptions

1. That advance hurricane warning will be received from the National Oceanographic and Atmospheric Administration (NOAA), and the National Hurricane Center, to allow the Civil Defense Director sufficient time to recommend that the Board of County Commissioners mandate evacuation of the threatened areas.

^{1/}It should be noted that these changes should be interpreted as recommendations and should not be construed as locally adopted evacuation times.

2. Infirm and handicapped people and ambulatory people without transportation are registered with the Civil Defense Department.

D. Situation

The National Weather Service has informed Hernando County officials of an impending natural disaster that may cause extensive damage and loss of life. Therefore, serious consequences to life and property could result particularly without the prompt application of emergency procedures.

1. Maximum evacuation time is estimated to be 15 to 33 hours depending on whether or not there is an accompanying Tampa Bay evacuation.^{2/} Times may vary depending upon whether the evacuation is ordered during the daytime, night time, weekend, holidays, or tourist season and road conditions. They are also dependent on the intensity of the storm.

There are many low areas along the evacuation routes on the extreme western mainland that flood in heavy rains. Evacuation must be completed before the rains arrive. Evacuation of the extreme western mainland must begin not later than 12 hours in advance of predicted hurricane landfall.

- 2.. Privately owned vehicles are the principal source of public transportation and must be fully utilized.

II. AUTHORITY

A. Local

1. Hernando County Resolution #77-73.
2. The Public Information Officer shall make appropriate weather announcements via the Civil Defense radio network to the local broadcast media for rebroadcast to the public at large. He shall announce that evacuation will begin at a specified time and announce the public shelters that are open. He shall also advise the governing body of each municipality of the order to evacuate.

^{2/} These times are revisions based on the evacuation times calculated for this report.

3. The County Attorney shall advise the Board of County Commissioners on all legal matters arising during emergencies caused by a natural disaster.
4. The American Red Cross shall open shelters upon the direction of the Chairman of the Board of County Commissioners or the Civil Defense Director.
5. The Hernando County Sheriff will deploy loud-speakers equipped in vehicles to direct the public to evacuate and to tell them which roads they are to take. He will coordinate the stationing of Law Enforcement Officers along the evacuation routes to direct evacuees to appropriate shelters.

B. State

1. Florida Statutes, Chapter 252, as amended.
"State Disaster Preparedness Act of 1974."
2. State of Florida, current Executive Order, #80-29.
3. Current Florida Peacetime Emergency Plan revised, December, 1980.

III. ORGANIZATION

A. Normal

Hernando County has a County Administrator who reports directly to the Board of County Commissioners. There are 15 Department Heads including the Civil Defense Director who reports to the County Administrator. There are 2 municipalities in Hernando County, (Brooksville and Weeki Wachee), each with a mayor or manager reporting directly to city council members.

B. Emergency

1. The Board of County Commissioners are empowered by Evacuation Order #80-29 as authorized to order evacuation.

2. The following Hernando County resources are available to support evacuation as required:
 - a. Civil Defense Department
 - b. Sheriff's Department
 - c. American Red Cross
 - d. Health Department
 - e. Fire Departments
 - f. County Transportation Department
 - g. County School Board
 - h. Public Works Department
 - i. Environmental Health Department
 - j. Planning & Zoning Department
 - k. Parks & Recreation Department
 - l. Building Division
 - m. Utilities Department
 - n. Privately owned resources, as required.
3. State resources - the resources of the State agencies listed below, are considered to be available to support Hernando County's evacuation plan. If State assistance is needed, it will be requested through the Central Florida Area Representative by the Civil Defense Director.
 - a. Department of Highway Safety and Motor Vehicles
 - b. Department of Natural Resources
4. All resources utilized in emergency operations of all Hernando County Departments will be in accordance with the latest Florida Statutes and organized to assist and support the County Department of Civil Defense plans and programs.

C. Control Levels

1. Bureau of Disaster Preparedness at the Central Florida Area Agency
2. County Commission
3. Municipalities

D. Order of Authority

1. Board of County Commissioners
2. County Civil Defense Director
3. Hernando County Sheriff

IV. CONCEPT OF OPERATIONS

A. Hurricane Watch

1. A Hurricane Watch shall be posted by the Director of Civil Defense when a continuous track of a hurricane indicates that it is traveling in the direction of Hernando County and that the estimated time of landfall, in Hernando County, is approximately 3 days away.
2. The Civil Defense Director shall then alert the following local authorities that a hurricane watch has been posted:
 - a. Chairman of the Board of County Commissioners
 - b. County Administrator
 - c. Hernando County Sheriff
 - d. All County Department Heads
 - e. Chief of Fire Services
 - f. Red Cross Chairman
 - g. Public Information Officer
 - h. Hospital and Resting Home Administrators
3. All elected officials, City and County Attorneys, City Managers or Mayors, and County Administrator should review the Governor's Executive Order #80-29, Florida Statutes #252, the Hernando County Peacetime Emergency Plan and this Hurricane Evacuation Plan.
4. The Board of County Commissioners shall authorize the Director of Civil Defense to recommend early, voluntary evacuation to the general public residing in threatened areas and authorized the transport of infirm and handicapped to medical evacuation centers at the appropriate time and before mass evacuation begins.

5. The heads of all City and County Departments shall perform the following functions during the hurricane watch:
- a. Cancel all leaves of personnel assigned emergency duties.
 - b. Alert all auxiliary and other volunteer personnel to stand-by for duty.
 - c. Have all personnel review their shelter and survival plans for the safety and well-being of their families. Personnel who are assigned duty stations at the Hernando County E.O.C. may bring their families to the E.O.C. for shelter. Personnel who are assigned duty stations at the Red Cross Public Shelter may bring their families with them. All other unassigned personnel may be sent home at the Department Director's discretion.
 - d. Check all equipment, supplies, fuel, facilities, first aid kits and communications to assure readiness to meet the hurricane emergency. Take corrective action as required.
 - e. Prepare to secure all facilities not required to be activated during the hurricane emergency.
 - f. Review the Hernando County Peacetime Emergency Plan and this Evacuation Plan. Update plans to meet current conditions but in no case do less than the plans specify.
 - g. Update list of County volunteers having radio equipped cars that are assigned to shelters for the specified purpose of establishing radio communications between the shelters and the Hernando County E.O.C. Submit updated list to the Director of Civil Defense.

Other specified duties shall be as follows:

B. Director of Civil Defense

Release advisory messages to the Public Information Officer for transmission to the electronic media for rebroadcast to the general public.

Messages are to include:

1. Details about the hurricane.
2. Identity and location of Public Shelter.
3. Details about transportation for the infirm, disabled and ambulatory persons without transportation.
4. Survival information regarding food, water, medicines and other essentials.
5. Identification of areas that have to be evacuated.
6. Protective measures to be taken by those in areas that do not have to be evacuated.
7. Emergency telephone numbers for Civil Defense.
8. Recommendation for early voluntary evacuation for those who wish to seek private shelter within or without the County.
 - a. Make preparations to house and feed the off-duty personnel and their families that will be manning the Hernando County E.O.C.
 - b. Convene the Hernando County Evacuation Committee and brief the members on the hurricane conditions and on the implementation of emergency plans and procedures.
 - c. Activate the E.O.C.

C. Sheriff

1. Review security measures for evacuation of prisoners from threatened areas.
2. Review coordination plans among the police services.

3. Alert kitchen personnel to provide food for the personnel manning the Hernando County E.O.C. and their families.

D. Chief of Fire Services and SAS Ambulance Service

1. Transport all infirm and disabled persons who require transportation by ambulance to an Emergency Medical Evacuation Center to determine status of the individual and if he/she will be ready to be transported should the need arise. Ascertain that the individual will bring an adequate supply of prescription medication and other special medical necessities such as portable life support equipment.

E. Department of Public Works Director

1. Place on standby all heavy equipment from governmental and non-governmental agencies.
2. Place on standby full gasoline and diesel fuel tankers to provide fuel for emergency vehicles.

F. Health Department Director

1. Check readiness of immunization supplies, sanitary controls for drinking water supplies, mortuary services, aid stations, blood banks, and communications.
2. Check preparations for cleaning milk transport tankers prior to filling with potable water.

G. Medical Examiner of Hernando County

1. Alert all physicians and surgeons who have assigned stations in public shelters and in emergency medical evacuation centers that a hurricane watch has been posted and to standby to man their stations.
2. Check readiness of the Hernando County 166 bed emergency hospital.

3. Check readiness of all nursing homes in endangered area to effect total evacuation if the need arises.
4. Check all stations for essential triage equipment and supplies.

I. County Attorney

1. Prepare to advise the Board of County Commissioners on all legal matters that may arise as a result of the hurricane emergency.

J. Public Information Officer

1. Report to the Director of Civil Defense for briefing.
2. Make periodic announcements to the radio and television stations on the location of the hurricane, and provide them with safety advisories for retransmission to the general public. Recommend start of voluntary evacuation for all who seek private shelter within or without the County. Recommend infirm, handicapped and all able bodied persons without transportation be prepared to be picked up by county supplied vehicles.

K. School Transportation Department Supervisor

1. Check all school buses, fuel supplies and communications for readiness.
2. Check routes and designate alternate routes if the need occurs.

L. Disaster Chairman, American Red Cross

1. Call volunteers assigned shelter responsibilities and notify them that a hurricane watch has been posted and to proceed with the following:
 - a. Check all shelters for readiness.
 - b. Check food supply outlets and place them on standby to supply food.
 - c. Check available chemical toilets for distribution to shelters.
 - d. Check available potable water containers and bleach for distribution to shelters.
 - e. Check availability of law enforcement officers for each shelter.

M. Utilities Department Director

1. Place on standby all milk transport tankers or equivalent vehicles to be ready to be filled with potable water for use as required. Place pumping stations in readiness to fill these tankers.

N. Hurricane Warning^{3/}

1. A Hurricane Warning shall be posted by the Director of Civil Defense when a continuous track of a hurricane indicates that it is heading for Hernando County, and that the estimated time of landfall is at the highest evacuation time for the forecasted intensity of the storm.
2. The Director of Civil Defense shall then alert all personnel that a hurricane warning has been posted and give them the estimated time of arrival (ETA) of the hurricane.
3. All elected officials, city and county department heads, city and county fire and ambulance and police services personnel, Red Cross personnel, public school personnel and volunteers who have been assigned emergency duty stations shall man their stations before the forecasted evacuation time.
4. All stations report status to the E.O.C. at the recommended evacuation time. Stations should be manned and ready at this time to begin evacuation.
5. Upon direction of the Chairman of the Board of County Commissioners, the Civil Defense Director shall order the opening of public shelters and mandatory evacuation of threatened areas and deployment of field personnel and equipment to safe shelters at the appropriate times.
6. The heads of all city and county departments shall also perform the following functions when the hurricane warning is announced. These functions should be completed before the recommended evacuation time.

^{3/} The times listed in this section are revisions based on the evacuation times calculated for this report.

i. Director of Civil Defense

- a. Brief the Board of County Commissioners on the approaching hurricane and recommend it declares that a state of emergency exists and to order an evacuation of the endangered areas at the recommended evacuation time.
- b. Identify the endangered areas to all emergency operations center personnel.
- c. Request of the appropriate director:
 - 1. Positioning of men and equipment along the evacuation routes.
 - 2. Positioning of emergency fuel supply tankers at critical locations.
 - 3. Positioning of water filled milk transport tankers at critical locations.
 - 4. Closing of all schools.
 - 5. Opening of all shelters.

ii. Sheriff

- a. Station uniformed law enforcement officers at critical places along the evacuation route and in public shelters. Set up road blocks as required to provide an orderly flow of traffic to shelters.
- b. Position traffic control devices such as signs, barricades and cones along the evacuation routes as required.
- c. Dispatch bull horn equipped vehicles to endangered areas to warn people to evacuate.
- d. Provide security for the evacuated areas as personnel and equipment permit.

iii. Chief of Fire Services and SAS Ambulance

- a. Begin transportation of the infirm requiring ambulances to medical evacuation centers. Patients on electrically operated life support equipment are to be transported to the best designated location.
- b. Dispatch bull horn equipped vehicles to endangered areas to warn people to evacuate.

iv. Health Department Director

- a. Position refrigerated vehicles at strategic locations.
- b. Check water filled milk tankers for water quality.

v. Medical Director - Emergency Services

- a. Station physicians, surgeons and nurses in all medical evacuation shelters, and physicians at all primary hurricane shelters.

vi. Public Information Officer

Inform the local radio and television stations to rebroadcast to the general public:

- a. The identity of the endangered areas.
- b. The order from the Board of County Commissioners to evacuate the endangered areas.
- c. The location of public shelters and specify which evacuation area residents are to go to which shelter.
- d. The order of priority of evacuation:
 - 1. All infirm, handicapped and people without transportation from all areas.
 - 2. All coastal and island residents.
 - 3. All mobile home parks on the mainland.
 - 4. All residents of low lying areas on the mainland.

The starting time for each sequence shall be announced.

vii. School Transportation Department Supervisor

- a. Begin transport of the handicapped in wheel-chairs to medical evacuation centers.
- b. Begin transportation of food and water to the public shelters.

viii. All Department Directors

- a. Order all field personnel and vehicles to safety upon the direction of the Board of County Commissioners.

ix. Civil Air Patrol Commander

- a. Conduct aerial reconnaissance over pre-assigned areas and along the evacuation routes.
- b. Provide limited air transportation for the most seriously injured.
- c. Provide air transportation of medical supplies and rescue teams.
- d. Report findings of aerial surveillance to the Civil Defense E.O.C.
- e. Provide ground support units to assist the Sheriff as required.

7. Primary Evacuation Routes

- a. See Map 2. and Table 13.
- b. Mobile Home Park Residents - all areas, all residents of all mobile homes must evacuate their homes regardless of location if the hurricane is determined to be severe. If the recreation center in any mobile home park is a certified hurricane shelter, park residents shall leave their mobile homes and go to the recreation center. If it is not a certified shelter, park residents must leave their mobile homes parks for a safer shelter. Evacuation routes will be the shortest route to the nearest shelter (all Hernando County Schools.)

- c. The Sheriff shall redirect traffic flow as required to be compatible with road conditions.

O. Hurricane Onslaught

1. All personnel shall remain in shelters until the all clear is given by the Board of County Commissioners.

P. Post Hurricane Conditions

1. The Director of the Hernando County Department of Public Works shall deploy the damage survey team to determine extent of damage and to begin road clearing operations, report to the Board of County Commissioners the approximate time it would take to make the roads safe and passable and which of the evacuated areas are safe for people to return to. Submit damage reports to the Director of Civil Defense.
2. The Sheriff shall establish road blocks as required and position uniformed law enforcement officers along evacuation routes as required to provide an orderly return to evacuated areas.
3. The Director of the Hernando County Health Department shall take all appropriate measures to safeguard the health of the Public.
4. The Medical Director of Emergency Services shall prepare the infirm for return to their homes when so ordered by the Board of County Commissioners.
5. The Hernando County Medical Examiner shall remove any dead bodies to appropriate receiving facilities.
6. The Disaster Chairman of the Red Cross shall prepare all shelterees for return to their homes when so ordered by the Board of County Commissioners.
7. The Director of the Hernando County Department of Public Works shall deploy the Damage Assessment Team as soon as practical and compile a detailed report on damages sustained to public and private property.

8. The Public Information Officer shall request the local radio and the nearest television stations to rebroadcast the identity of areas that are safe to return to as they are declared safe by the Board of County Commissioners.
9. All Directors of all Departments shall do whatever is necessary to restore damaged areas, equipment and facilities to normal as soon as practical. They shall report estimates of damage to equipment and facilities to the Director of Hernando County Public Works Department. Photographs shall be taken of all damaged areas and equipment. Each photograph shall contain the identity of the site or equipment, time, date and the cause of the damage, i.e. hurricane winds, tornado, flood waters, tidal waters, etc.

V. RESPONSIBILITIES

- A. Hernando County public school buses will be utilized to evacuate persons without their own means of transportation.
- B. U.S. Coast Guard Auxiliary vessels may be utilized to evacuate persons by water in accordance with the U.S. Coast Guard approved Hurricane Disaster Plan.
- C. Should evacuation be required, after evaluation of warning advisories from the National Weather Service, the Director of Civil Defense will utilize all available news facilities (radio and television) to make appropriate announcements to the public, advising them of the areas which might be inundated.
- D. Law enforcement and fire vehicles equipped with sirens and public address systems will be utilized throughout areas to be evacuated to warn all persons not already informed that evacuation is ordered. Should the warning occur during the night time hours, the law enforcement and fire personnel will make every effort to awaken residents and inform them of the emergency.
- E. Fixed sirens at fire stations shall be sounded to alert the people to listen to radio announcements using three to five minute steady blast signals.

- F. The Board of County Commissioners will direct and compel the evacuation of endangered areas when conditions warrant.
- G. The Sheriff shall coordinate the placement of Police Officers along the evacuation route to direct evacuees to the appropriate shelters. He shall also coordinate the placement of law enforcement officers in public shelters.
- H. The Director of the Department of Public Works shall position heavy equipment at critical locations.
- I. The Civil Defense Director shall coordinate all orders of the Board of County Commissioners with all E.O.C. personnel.
- J. The County Administrator shall direct all orders from the Board of County Commissioners to the Department Directors and coordinate all such orders with the city managers/mayors of each municipality.
- K. The County Attorney shall provide all consultation in all legal matters that may arise.
- L. All County Department Directors not assigned specific responsibilities shall support the Sheriff or the Department of Public Works, as directed by the County Administrator.
- M. The Civil Air Patrol may be used to conduct aerial surveillance of the evacuation proceedings and search operations after the hurricane has passed.
- N. The Florida National Guard may be used to supplement the Sheriff's forces in accordance with their Standard Operating Procedures for hurricane emergencies.

VI. TRAFFIC CONTROL POINTS

Traffic control points are points along the county evacuation network used to direct traffic, resolve congestion problems and to divert traffic to other shelter destinations when the capacity of public shelters is reached.

It is recommended that the "nodes" indicated on Map 2 be used as a basis for designating traffic control points in the county. In addition, Appendix B shows the projected amount of traffic on each of the links in the evacuation network during the evacuation. This information can also be used to determine traffic control points.

VII. SHELTER ASSIGNMENTS

Shelter assignments refer to the assignment of vulnerable persons within each evacuation zone to a particular shelter destination in the same or another evacuation zone. The assignment of individuals to public shelter destinations is based on the results of the transportation model.

The assignment of vulnerable residents requiring public shelter to public shelter destinations follow a three-phased procedure: designation of reception centers, assignment of intra-county evacuees and assignment of intercounty evacuees.

Designation of Reception Centers. In order to prevent the unnecessary opening of public shelters and thereby conserve needed evacuation manpower, evacuees will be first assigned to a reception center. A reception center is a key primary public shelter which will serve as a control point for opening additional public shelters. One reception center will be opened in each evacuation zone which contains at least one primary public shelter. During the evacuation process, as it becomes apparent that the capacity of the reception center will be exceeded, other primary public shelters in the evacuation zone or surrounding evacuation zones can be opened through a communications network.

The criteria for the designation of reception centers are those primary shelters in each evacuation zone which have the greatest shelter capacity and are the most feasible for use as public shelter. Reception centers and associated primary public shelters for Hernando County are presented in table 12.

TABLE 12

RECEPTION CENTERS AND ASSOCIATED PRIMARY SHELTERS

<u>Evacuation Zone</u>	<u>Reception Center</u>	<u>Associated Primary Shelters</u>
H7	(H6) Springstead High School	(H8) Westside Elementary School ^{1/} (H7) West Hernando Jr. High (H5) Spring Hill Elemen- tary School
H11	*(H2) Eastside Elementary School	None
H14	(H4) D.S. Parrott Jr. High School	(H1) Mitchell L. Black Elementary School (H3) Hernando High School

^{1/}Shelter will only be used under vulnerability level 'A'.

Intra-County Assignment. The goal of the intra-county shelter assignment is to minimize clearance time. As part of the transportation model, vulnerable intra-county residents were assigned to primary public shelter locations in each county.^{2/}

The logic of this shelter assignment can be seen by comparing table 13 with map 2. Table 13 shows the "paths" by which the vulnerable residents of an evacuation zone proceed to their primary shelter destinations. This is represented conceptually on map 2 with evacuation zone centers, or centroids, and street or intersection locations, or nodes.

By following these paths, it can be seen that the vulnerable residents of each evacuation zone are assigned to the nearest primary shelter location until all the available primary shelters in the destination evacuation zone are utilized. If there is any overflow, the remaining evacuees are assigned to the nearest available primary public shelter.

Inter-County Assignment. In the case of both the Withlacoochee and Tampa Bay regions evacuating (Regional Scenario C), it is assumed that a certain percentage of the Tampa Bay evacuees will enter the coastal counties via U.S. 41.

Under this scenario, the first reception center nearest U.S. 41 in each coastal county shall be designated as an inter-regional control center. These centers will monitor the number of incoming intra- and inter-regional evacuees and disseminate them, first among available primary shelter capacity and then to secondary shelters, if primary shelter capacity is exceeded.

^{2/} It was assumed in the assignment of intra-county evacuees that primary public shelters would be opened first. Since there is adequate primary shelter capacity for coastal county evacuees, no secondary shelters were used in the assignment.

TABLE 13

HERNANDO COUNTY EVACUATION ROUTES
TO PUBLIC SHELTER

H01-H101, H103, H107, H111-H14 or H01-H100, H102, H103, H107,
H111-H114

H02-H105, H106-H04 or H02-H101, H103, H104, H106-H04 (Flood
Level A); H02-H105, H106, H104-H07 or H02-H101, H103, H104-
H07 (Flood Level B)

H03-H105, H106-H04 (Flood Level A); H03-H105, H106-H104-H07
(Flood Level B)

H04-H04 (Flood Level A); H04-H106, H104-H07 or H04-H106, H104,
H103, H107, H111, H116-H12 or H04-H106, H104, H103, H107, H111,
H110-H12

H05-H102, H103, H107, H111-H14

H06-H06 or H06-H107, H111-H14

H07-H07

H08-H107, H111-H14 or H08-H113, H112, H111-H14

H08-H112, H111, H110-H12 or H09-H115, H111, H116-H12

H10-H117, H116-H12 or H10-H114, H115, H111, H110-H12

H11-H119, H118, H117, H116-H12

H12-H12

H13-H108, H111-H14 or H13-H109, H110, H111-H14

H14-H14

Source: Post, Buckley, Schuh & Jernigan, Inc.

APPENDIX

APPENDIX A

HERNANDO COUNTY EVACUATION ZONE BOUNDARIES

<u>Evacuation Zone</u>	<u>Zone Boundary Description</u>
H1	South of Hernando County line; west of one mile east of US 19 and west of US 19 at Tooke Lake; north of SR 50; east of Gulf of Mexico
H2	South of SR 50; west of US 19; north of Little Pine Island area; east of Gulf of Mexico
H3	South of Little Pine Island; west of US 19; north of Hernando County line; east of Gulf of Mexico
H4	South of SR 50; west of 1½ miles east of US 19; north of Hernando County line; east of US 19
H5	South of Tooke Lake; west of one mile east of US 19; north of SR 50; east of US 19
H6	South of Centralia Road; west of CR 491; north of SR 50; east of one mile east of US 19
H7	South of SR 50; west of Spring Hill; north of Hernando County line; east of 1½ miles east of US 19
H8	South of SR 50 and CR 572; west of CR 581; north of Hernando County line; Spring Hill area
H9	South of SR 50, Brooksville city limit, and US 98; west of Spring Lake and CR 577; north of CR 572; east of Weeki Wachee Prairie and Brook Ridge areas
H10	South of CR 572 and SR 50; west of I-75 and Hernando County line; north of Hernando County line; east of CR 581
H11	South of Hernando County line; west of Hernando County line; north of Hernando County line; east of I-75
H12	South of Hernando County line; west of I-75; north of US 98; east of Brooksville city limit

APPENDIX A (Cont.)

<u>Evacuation Zone</u>	<u>Zone Boundary Description</u>
H13	South of Hernando County; west of SR 45; north of Brooksville city limit and SR 50; east of CR 491, Centralia Road and one mile east of US 19
H14	Brooksville city limits

APPENDIX B

HERNANDO COUNTY ASSIGNED LINK VOLUMES AND V/C RATIOS

<u>Link</u>	<u>A</u>	<u>A w/tb</u>	<u>B</u>	<u>B w/tb</u>	<u>Volumes</u>	<u>A</u>	<u>A w/tb</u>	<u>B</u>	<u>B w/tb</u>
100-102	134	134	138	138	25900	.005	.005	.005	.005
102-103	201	201	428	428	32400	.006	.006	.013	.013
101-103	624	624	628	628	14600	.043	.043	.043	.043
103-104	1349	1349	4574	4574	32400	.042	.042	.141	.141
104-106	1247	1247	5917	5917	25900	.048	.048	.228	.228
105-106	1860	1860	1877	1877	11700	.159	.159	.160	.160
103-107	1497	1497	5143	5143	14600	.103	.103	.352	.352
107-111	2861	2861	6218	6218	14200	.201	.201	.438	.438
108-111	312	312	365	365	14600	.021	.021	.025	.025
109-110	644	3208	720	3284	14600	.044	.220	.049	.225
110-111	627	3191	725	3289	14200	.044	.225	.051	.232
111-112	300	11198	271	11169	14200	.021	.789	.019	.787
112-113	200	11098	85	10983	14600	.014	.760	.006	.752
111-115	329	329	466	466	14200	.023	.023	.033	.033
114-115	112	112	218	218	14600	.008	.008	.015	.015
116-117	2499	9607	4477	11305	14600	.171	.658	.307	.774
111-116	2779	9327	4077	10905	14200	.196	.657	.287	.768
117-118	2998	9826	4578	11406	21600	.139	.673	.314	.771
118-119	1384	15041	2234	15891	14600	.095	1.030	.153	1.088
200-109	0	2564	0	2564	14600	.000	.176	.000	.176
201-118	1397	57906	2127	58033	68400	.020	.847	.031	.848
202-119	0	8103	0	8103	14600	.000	.555	.000	.555
206-119	1398	1398	2127	2127	14600	.096	.096	.146	.146
203-119	0	21797	0	21797	14600	.000	1.493	.000	1.493
204-118	0	35421	0	35421	68400	.000	.518	.000	.518
205-113	0	10898	0	10898	14600	.000	.746	.000	.746

APPENDIX C

LEGAL AUTHORITY TO ISSUE AN EVACUATION ORDER

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 Statutes 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 an evacuation from any approaching storm.

The diffusion of the authority to issue an evacuation order does not create problems during a 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 population 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 evacuation 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. A proposed mechanism to achieve this coordination is described in Chapter VI, Regional Coordinative Mechanism.

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