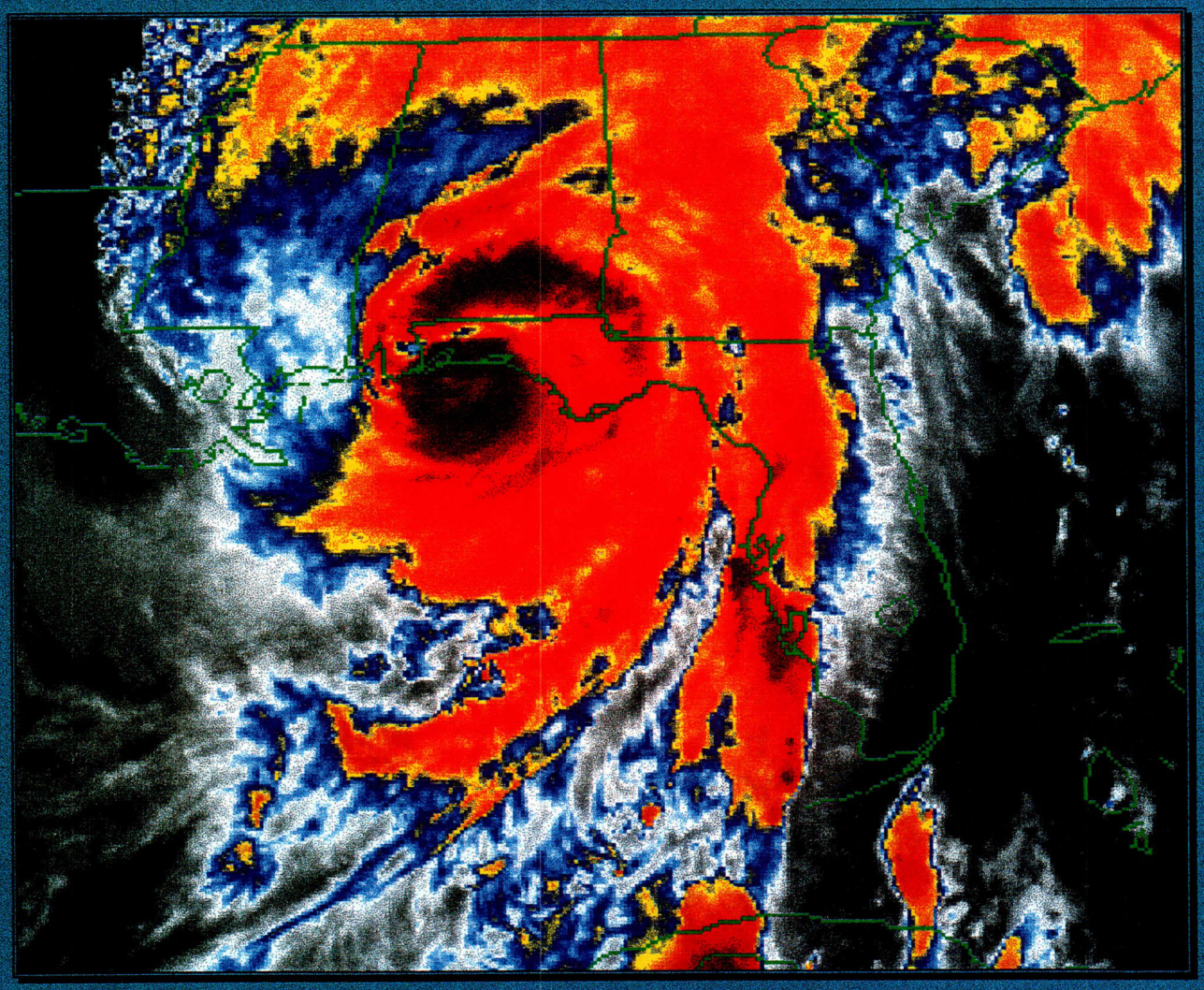
NORTHWEST FLORIDA
HURRICANE EVACUATION STUDY
Technical Data Report

For Escambia, Santa Rosa, Okaloosa, Walton, Bay, Holmes, Jackson and Washington Counties, Florida

July 1999



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THE NORTHWEST FLORIDA HURRICANE EVACUATION STUDY

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INTRODUCTION

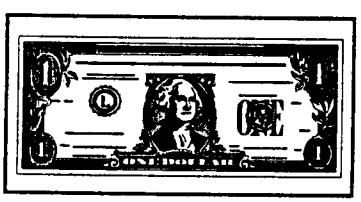
Northwest Florida Hurricane Evacuation Study

CHAPTER ONE - INTRODUCTION

STUDY PURPOSE

The purpose of this Hurricane Evacuation Study is to provide emergency management officials information that could assist them in hurricane evacuation decision-making. The technical data presented in this report can be used by County and State Agencies to supplement their hurricane evacuation plans and operational procedures to response to future hurricane threats.

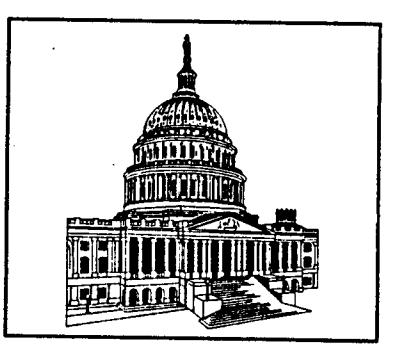
FUNDING



The Study was funded by the Federal Emergency Management Agency, the U.S. Army Corps of Engineers and the State of Florida Department of Community Affairs, Division of Emergency Management. Local community officials and agencies provided valuable data and coordination throughout the study at their own expense.

AUTHORITY

The authority for the U.S. Army Corps of Engineers' participation in this study is Section 206 of the Flood Control Act of 1960 (Public Law 86-645). The Federal Emergency Management Agency's participation is authorized by the Disaster Relief Act of 1974 (Public Law 93-288). These laws authorize the allocation of resources for planning activities related to hurricane preparedness.



DESCRIPTION OF STUDY AREA

a. Geography

The Northwest Florida Study area is shown in Figure 1-1. The study area includes the coastal counties of Escambia, Santa Rosa, Okaloosa, Walton and Bay. The inland counties are Holmes and Washington, with some information show for Jackson County. Most of the Gulf coastline of these counties is made up of barrier islands and peninsulas. Most of the shoreline has beautiful white sand beaches with shallow blue clean waters. Mean tide range is about 1-2 feet. Excellent roads across the entire coastal area has made it an outstanding scenic and tourist attraction and a very desirable place to live.

Each coastal county contains large bay areas which create many additional miles of shoreline subject to hurricane impacts. The orientation of the coastline generally faces south in all five coastal counties. The coastline topography of the study area varies from relatively flat and gradually sloping to steep bluff lines up to 50-60 feet. All five counties have streams and rivers with significant drainage basins that empty into the bays and sounds of the Gulf of Mexico. These include the Choctawhatchee, Perdido, Yellow, Blackwater, and Escambia-Conecuh Rivers and Econfina Creek.

b. Geology and Soils.

The coastal plain is generally flat and represents ancient sea bottoms and beaches. The underlying rock in the area began as lime accumulations from marine organisms or sedimentary deposits of silt, sand and clay. The lower Tertiary beds of limestone, clay, gravel and sand form thick layers toward the south and taper to the north. The Chipola formation and the Marianna and Ocala limestones have identifiable beds and are important water bearing formations. This complex of Tertiary limestones form the principle artesian aquifer in North west Florida. These sediments rest on a base of crystalline rock, which is from 2,500 to 4,000 feet below the land surface.

The rolling relief in the northern part of the Counties is part of the Creaceous area, locally called the Sand Hills. The most outstanding characteristic of these grayish brown and loams are that they are mixed in character, have dense sandy clay subsoils, and are very susceptible to erosion. The Southern Pine Hills, associated with the Miocene and post-Miocene strata in the southwestern portion of the study area, consists of gray soils, sandy clay, and gravelly sandy loams.

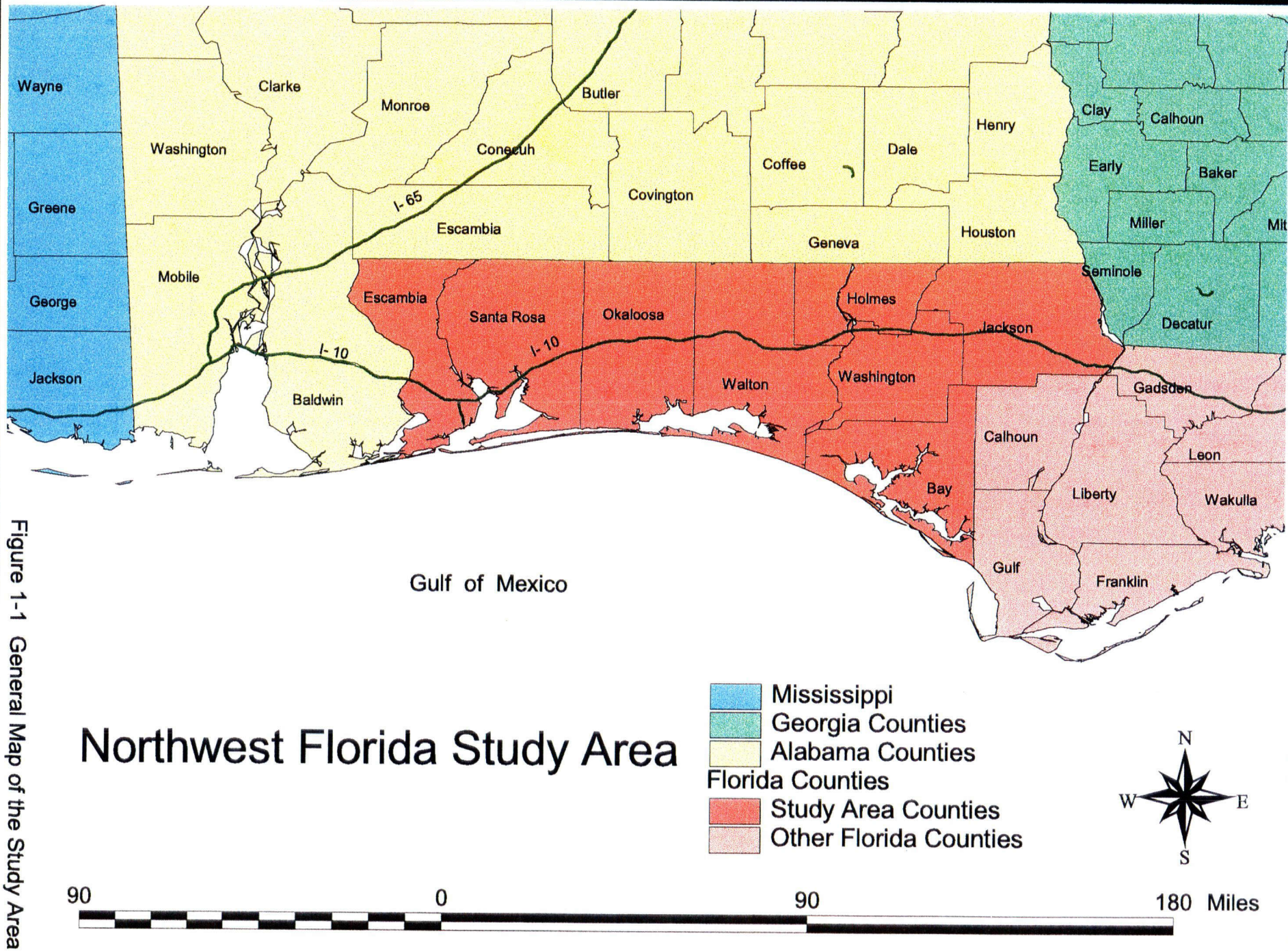


Figure 1-1 General Map of the Study Area

c. Bathymetry

Shallow water close to shore, tends to increase the magnitude of hurricane-induced storm surge, therefore the depth of water offshore (bathymetry) is extremely important. Off Perdido Key in Escambia County the 30-foot water depth is about 1-2 miles offshore and the 60-foot depth is about 5 miles out. As you move east toward Santa Rosa Island these depths get closer to shore. Along the length of Santa Rosa Island and the Okaloosa and Walton County coastlines the 30-foot depth is only about a quarter to one-half mile off shore and the 60-foot depth is approximately one mile out. At Panama City Beach the water depths begin to decrease as you approach Mexico Beach where the 30-foot depth is about 5 miles offshore and the 60-foot depth is about 7 miles out.

The Northwest Florida coastline is banded with barrier islands which divide a number of sounds and bays from the Gulf of Mexico. The sounds and bays are also relatively shallow with maximum depths to about 30-35 feet in Pensacola Bay, 10 feet in Escambia and East Bay, 35 to 40 feet in Choctawhatchee Bay, 20-25 feet in West and East Bay and 35-40 feet in St. Andrews Bay.

d. Population/Demographics

The study area is generally rural with most of the population concentrating along the coastal areas. The following table shows the estimated population for the study area counties for the years 1990, 2000 and 2005. The estimated growth rate from 2000 to 2005 is also shown. The year 2000 population figures were carefully estimated with close coordination with the counties and the West Florida Regional Planning Council. The year 2005 population estimates are an average of the Florida State Abstract projections for medium and high growth rates in the area.

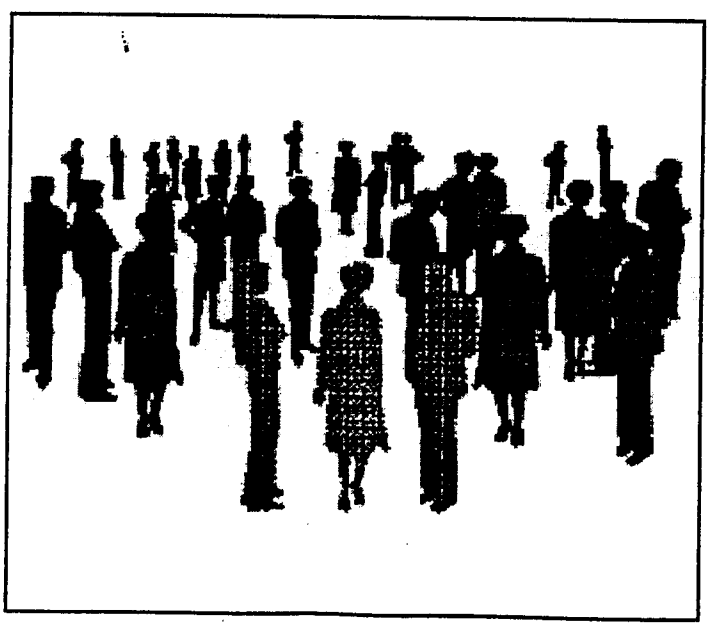


Table 1-1 Population Characteristics

For the Northwest Florida Study Area Counties

COUNTY NAME	1990 Population	Estimated Population Year 2000	Estimated Population Year 2005	2000-2005 Growth as a Percent
Escambia	262,798	304,000	334,300	9.8%
Santa Rosa	81,608	114,000	138,200	21.4%
Okaloosa	143,776	177,000	212,200	20.1%
Walton	27,760	35,000	39,500	12.5%
Bay	126,994	155,000	172,600	11.4%
Holmes	15,778	18,000	20,400	13.3%
Washington	16,919	21,800	25,400	16.4%
Jackson	41,375	Not available	Not available	Not available

The following paragraphs give a more detailed description of the demographics of each County in the Study Area.

a. Escambia County

- The population was 262,798 in 1990 and estimated to be 304,000 in 2000.
- In 1990 49% of the total population were male.
- In 1990 the age distribution of the population was as follows:

Ages	0-15	59,334	Ages	45-64	51,335
Ages	16-24	38,782	Ages	over 65	31,295
Ages	25-44	82,052			

- In 1990, there were 20,484 (11.9%) county residents between the ages of 16-64 that had a mobility or self-care limitation. Among residents 65 and older 7,365 (23.5%) had a mobility or self-care limitation.
- In 1990 the race composition of the County was as follows:

White	76.6%	Black	20.0%	Other	0.5%
American Indian, Eskimo or Aleut	1.0%	Asian or Pacific Islander	1.9%		

- In 1990, 1.91% (5013) of the population was of Hispanic origin.
- In 1990, the median family income was $29,490; the Per capita income was $12,161and the unemployment rate was 5.3%.
- In 1990, the county had 112,230 housing units of which 87.9% were occupied.

b. Santa Rosa County

- The population was 81,608 in 1990 and estimated to be 114,000 in 2000.
- In 1990 half of the total population were male.
- In 1990 the age distribution of the population was as follows:

Ages	0-15	19,836	Ages	45-64	16,783
Ages	16-24	9,879	Ages	over 65	7,759
Ages	25-44	27,351			

- In 1990, there were 5,284 (9.8%) county residents between the ages of 16-64 that had a mobility or self-care limitation. Among residents 65 and older 2,041 (26.3%) had a mobility or self-care limitation.
- In 1990 the race composition of the County was as follows:

White	93.6%	Black	4.0%	Other	0.3%
American Indian, Eskimo or Aleut	0.9%	Asian or Pacific Islander	1.2%		

- In 1990, 1.5% (1,223) of the population was of Hispanic origin.
- In 1990, the median family income was $31,033; the Per capita income was $12,656 and the unemployment rate was 5.3%.
- In 1990, the county had 32,831 housing units of which 91.1% were occupied.

c. Okaloosa County

- The population was 143,776 in 1990 and estimated to be 177,000 in 2000.
- In 1990 51% of the total population were male.
- In 1990 the age distribution of the population was as follows:

Ages	0-15	33,453	Ages	45-64	27,969
Ages	16-24	19,633	Ages	over 65	13,319
Ages	25-44	49,402			

- In 1990, there were 17,601 (11.9%) county residents between the ages of 16-64 that had a mobility or self-care limitation. Among residents 65 and older 2,996 (22.5%) had a mobility or self-care limitation.
- In 1990 the race composition of the County was as follows:

White	87.1%	Black	9.1%	Other	0.8%
American Indian, Eskimo or Aleut	0.5%	Asian or Pacific Islander	2.5%		

- In 1990, 3.1% (4,427) of the population was of Hispanic origin.
- In 1990, the median family income was $31,662; the Per capita income was $13,147 and the unemployment rate was 4.2%.
- In 1990, the county had 62,569 housing units of which 85.2% were occupied.

d. Walton County

- The population was 27,760 in 1990 and estimated to be 35,000 in 2000.
- In 1990 49% of the total population were male.
- In 1990 the age distribution of the population was as follows:

Ages	0-15	5,843	Ages	45-64	6,677
Ages	16-24	2,899	Ages	over 65	4,585
Ages	25-44	7,756			

- In 1990, there were 953 (5.5%) county residents between the ages of 16-64 that had a mobility or self-care limitation. Among residents 65 and older 935 (20.4%) had a mobility or self-care limitation.
- In 1990 the race composition of the County was as follows:

White	91.1%	Black	6.8%	Other	0.1%
American Indian, Eskimo or Aleut	1.5%	Asian or Pacific Islander	0.5%		

- In 1990, 0.9% (244) of the population was of Hispanic origin.
- In 1990, the median family income was $25,222; the Per capita income was $11,290 and the unemployment rate was 5.8%.
- In 1990, the county had 18,728 housing units of which 60.3% were occupied.

e. Bay County

- The population was 126,994 in 1990 and estimated to be 155,000 in 2000.
- In 1990 49% of the total population were male.
- In 1990 the age distribution of the population was as follows:

Ages	0-15	28,836	Ages	45-64	25,842
Ages	16-24	15,999	Ages	over 65	15,259
Ages	25-44	41,058			

- In 1990, there were 9,868 (11.9%) county residents between the ages of 16-64 that had a mobility or self-care limitation. Among residents 65 and older 3,898 (25.6%) had a mobility or self-care limitation.
- In 1990 the race composition of the County was as follows:

White	86.3%	Black	10.8%	Other	0.4%
American Indian, Eskimo or Aleut	0.8%	Asian or Pacific Islander	1.7%		

- In 1990, 1.78% (2,256) of the population was of Hispanic origin.
- In 1990, the median family income was $28,217; the Per capita income was $12,225 and the unemployment rate was 4.9%.
- In 1990, the county had 65,999 housing units of which 74.2% were occupied.

f. Holmes County

- The population was 15,778 in 1990 and estimated to be 18,000 in 2000.
- In 1990 51% of the total population were male.
- In 1990 the age distribution of the population was as follows:

Ages	0-15	3,417	Ages	45-64	3,370
Ages	16-24	2,005	Ages	over 65	2,474
Ages	25-44	4,512			

- In 1990, there were 1,248 (12.6%) county residents between the ages of 16-64 that had a mobility or self-care limitation. Among residents 65 and older 920 (37.2%) had a mobility or self-care limitation.
- In 1990 the race composition of the County was as follows:

White	93.4%	Black	5.0%	Other	0.2%
American Indian, Eskimo or Aleut	1.1%	Asian or Pacific Islander	0.3%		

- In 1990, 1.12% (176) of the population was of Hispanic origin.
- In 1990, the median family income was $20,923; the Per capita income was $8,609 and the unemployment rate was 5.0%.
- In 1990, the county had 6,785 housing units of which 85.5% were occupied.

g. Washington County

- The population was 16,919 in 1990 and estimated to be 21,800 in 2000.
- In 1990 48% of the total population were male.
- In 1990 the age distribution of the population was as follows:

Ages	0-15	3,732	Ages	45-64	3,757
Ages	16-24	2,004	Ages	over 65	2,986
Ages	25-44	4,440			

- In 1990, there were 1,023 (10.03%) county residents between the ages of 16-64 that had a mobility or self-care limitation. Among residents 65 and older 1,090 (36.5%) had a mobility or self-care limitation.
- In 1990 the race composition of the County was as follows:

White	82.9%	Black	14.5%	Other	0.4%
American Indian, Eskimo or Aleut	1.7%	Asian or Pacific Islander	0.5%		

- In 1990, 1.06% (180) of the population was of Hispanic origin.
- In 1990, the median family income was $22,226; the Per capita income was $8,794and the unemployment rate was 5.1%.
- In 1990, the county had 7,703 housing units of which 83.6% were occupied.

h. Jackson County

- The population was 41,375 in 1990.
- In 1990 51% of the total population were male.
- In 1990 the age distribution of the population was as follows:

Ages	0-15	8,832	Ages	45-64	8,197
Ages	16-24	6,020	Ages	over 65	6,170
Ages	25-44	12,156			

- In 1990, there were 5,166 (19.6%) county residents between the ages of 16-64 that had a mobility or self-care limitation. Among residents 65 and older 1,830 (29.7%) had a mobility or self-care limitation.
- In 1990 the race composition of the County was as follows:

White	72.7%	Black	26.2%	Other	0.3%
American Indian, Eskimo or Aleut	0.6%	Asian or Pacific Islander	0.2%		

- In 1990, 2.35% (974) of the population was of Hispanic origin.
- In 1990, the median family income was $24,139; the Per capita income was $9,654 and the unemployment rate was 3.7%.
- In 1990, the county had 16,320 housing units of which 88.6% were occupied.

HISTORICAL HURRICANE ACTIVITY

a. General

Hurricanes are a classification of tropical cyclones which are defined by the National Weather Service as nonfrontal, low pressure synoptic scale (large scale) systems that develop over tropical or subtropical waters and have a definite organized circulation. The classification of tropical cyclones into tropical depressions, tropical storms, or hurricanes depends upon the speed of the sustained (1-minute average) surface winds near the center of the system. Tropical depressions are $\leq$ 33 knots (38 mph), tropical storms are 34 to 63 knots (37-74 mph) inclusive, and hurricanes are $\geq$ 64 knots (75 mph).

The geographical areas affected by tropical cyclones are referred to as tropical cyclone basins. The Atlantic tropical cyclone basin is one of six in the world and includes much of the North Atlantic Ocean, the Caribbean Sea, and the Gulf of Mexico. The official Atlantic hurricane season begins on June 1 and extends through November 30 of each year; however, occasional tropical cyclones can occur outside of this period.

Early season tropical cyclones are almost exclusively confined to the western Caribbean and the Gulf of Mexico. However, by the end of June or early July, the area of formation gradually shifts eastward, with a slight decline in the overall frequency of storms. By late July, the frequency begins to slowly increase, and the area of formation shifts still farther eastward. By late August, tropical cyclones form over a broad area which extends eastward to near the Cape Verde Islands off the coast of Africa. The period from about August 20 through September 15 produces the most severe hurricanes, many of which travel across the entire Atlantic Ocean. After mid-September, the frequency begins to decline and the formative area retreats westward. By early October, the area of maximum occurrence returns to the western Caribbean. In November, the frequency of tropical cyclone occurrence further declines.

b. Atlantic Tropical Cyclone Basin

Through the research efforts of the National Climate Center in cooperation with the National Hurricane Center, records of tropical cyclone occurrences within the Atlantic tropical cyclone basin have been compiled dating back to 1871. Although other researchers have compiled fragmentary data concerning tropical cyclones within this basin back to the late fifteenth century, the years from 1871 to the present represent the complete period of the development of meteorology and organized weather services in the United States. For the 119-year period from 1871 through 1990, about 1000 tropical cyclones have occurred within the Atlantic tropical cyclone basin data for the years 1871 through 1885 do not allow accurate determinations of the intensities of the storms occurring during those years. The National Hurricane Center maintains detailed computer files of the Atlantic tropical cyclone tracks back to 1886. Of the 889 known Atlantic tropical cyclones of at least tropical storm intensity occurring during the period 1886 through 1990, 519 (58%) are known to have reached hurricane intensity.

Figure 1-2 below illustrates the total number of tropical storms and hurricanes observed on each day, May 1 through December 31, 1886 through 1990.

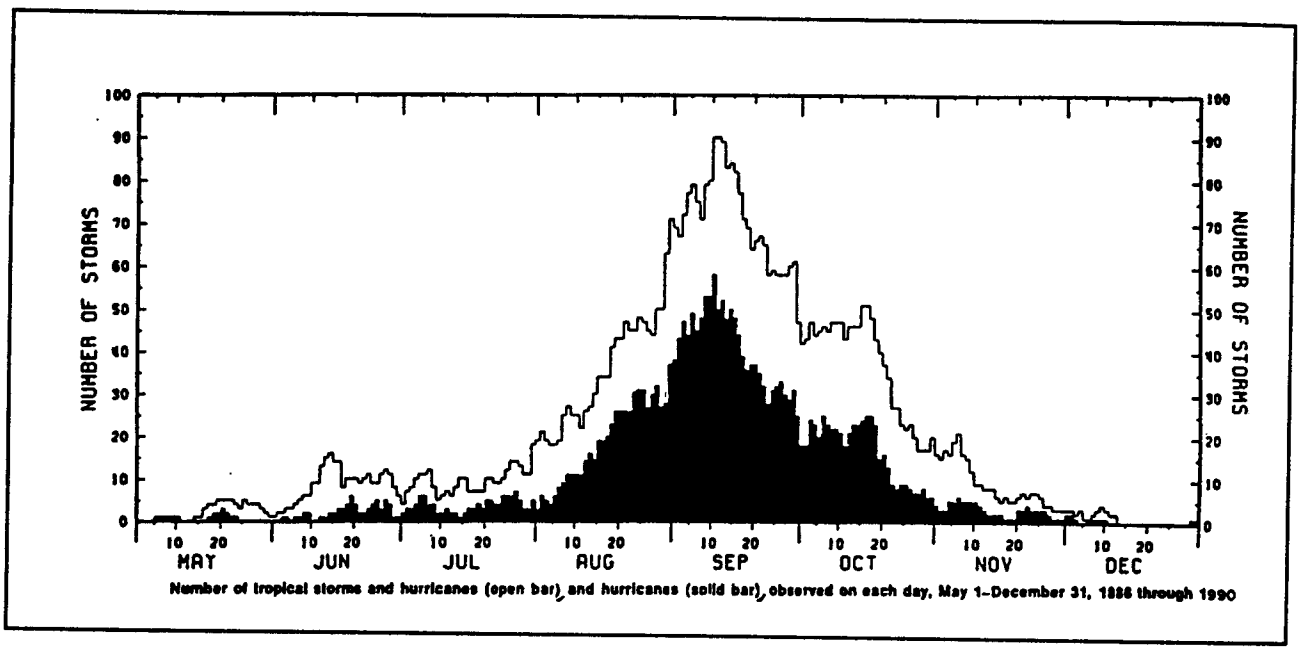


Figure 1-2 Tropical Storms and Hurricanes, 1 May 1886 - 31 Dec 1990

c. Pensacola and Panama City Basins.

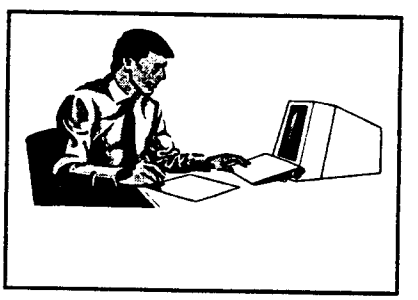
Between 1886 and 1993, 28 tropical cyclones of hurricane intensity passed within 125 statute miles of Pensacola Beach, Florida, for an average of one hurricane every 3.9 years. Between 1886 and 1994, 30 tropical cyclones of hurricane intensity passed within 125 statute miles of Panama City, Florida, for an average of one hurricane every 3.6 years. For the period 1871-1885, insufficient data exist to accurately determine which of the tropical cyclones that occurred might have reached hurricane intensity; therefore, for the period of record, the hurricane occurrences for each Basin are probably a conservative estimate.

The tracks of the 28 historic Pensacola Basin storms with hurricane force winds are displayed on Plates 1-1 thru 1-7. The tracks of the 30 historic Panama City Basin storms with hurricane force winds are displayed on Plates 1-8 thru 1-11.

MAJOR ANALYSES

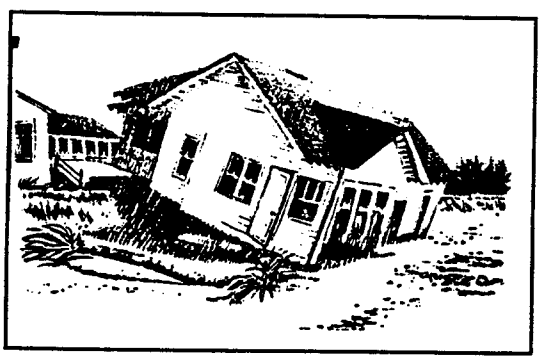
The Northwest Florida Hurricane Evacuation Study consists of several related analyses that develop technical data concerning hurricane hazards, vulnerability of the population, public response to evacuation advisories, timing of evacuations, and sheltering needs for various hurricane threat situations. The major analyses are briefly summarized in the following paragraphs. Detailed descriptions of the analyses and the methodologies of each are contained in subsequent chapters of this report.

a. Hazards Analysis



The hazards analysis determines the timing and magnitude of wind and storm surge hazards that can be expected from hurricanes of various categories, tracks, and forward speeds. The Sea, Lake, and Overland Surges from Hurricanes (SLOSH) numerical model was used by the National Hurricane Center to compute surge heights. Hazards from freshwater flooding are based on the Flood Insurance Rate Maps. The Hazards Analysis is presented in more detail in Chapter Two.

b. Vulnerability Analysis



Utilizing the results of the hazards analysis, the vulnerability analysis identifies those areas, populations, and facilities that are vulnerable to specific hazards under a variety of hurricane threats. Inundation maps were produced and evacuation scenarios were developed. Hurricane evacuation zones were delineated for the each of the four counties in the study area. Population data were used to determine the vulnerable population within each evacuation zone. In areas of potential inundation, critical facilities were identified, such as family care homes, nursing homes, and hospitals. Wind damage vulnerability has been evaluated in this study. Further discussion on all aspects of the Vulnerability Analysis is provided in Chapter Three.

c. Behavioral Analysis

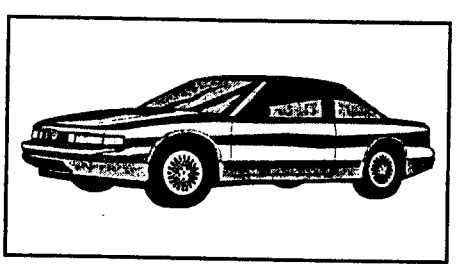
This analysis determines the expected response of the population threatened by various hurricane events in terms of the percentage expected to evacuate, probable destinations of evacuees, public shelter use, and utilization of available vehicles. The methodology employed to develop the behavioral data relied on telephone sample surveys and personal interviews within the study area, information from other Hurricane Evacuation Studies, and post-hurricane behavioral studies for Opal and in other areas. A thorough presentation of the Behavioral Studies can be found in Chapter Four.

d. Shelter Analysis

The shelter analysis presents an inventory of predesignated public shelter facilities, capacities of the shelters, vulnerability of shelters to storm surge flooding, and shelter demand for each county. Shelter inventories were furnished by emergency management offices in each county. Shelter demands were estimated from behavioral analysis data. Chapter Five contains additional information on the Shelter Analysis.

e. Transportation Analysis

The principal purpose of the transportation analysis is to determine the time required to evacuate the threatened population (clearance times) under a variety of hurricane situations and to evaluate traffic control measures that could improve the flow of evacuating traffic. Transportation computer modeling techniques developed to simulate hurricane evacuation traffic patterns were used to conduct this analysis. To provide a better estimate of where these people will go. Behavioral studies were made to estimate what portion of the evacuees will go to other inland counties or seek safe haven in Georgia or Alabama. Complete details on the Transportation Analysis is presented in Chapter Six.



COORDINATION

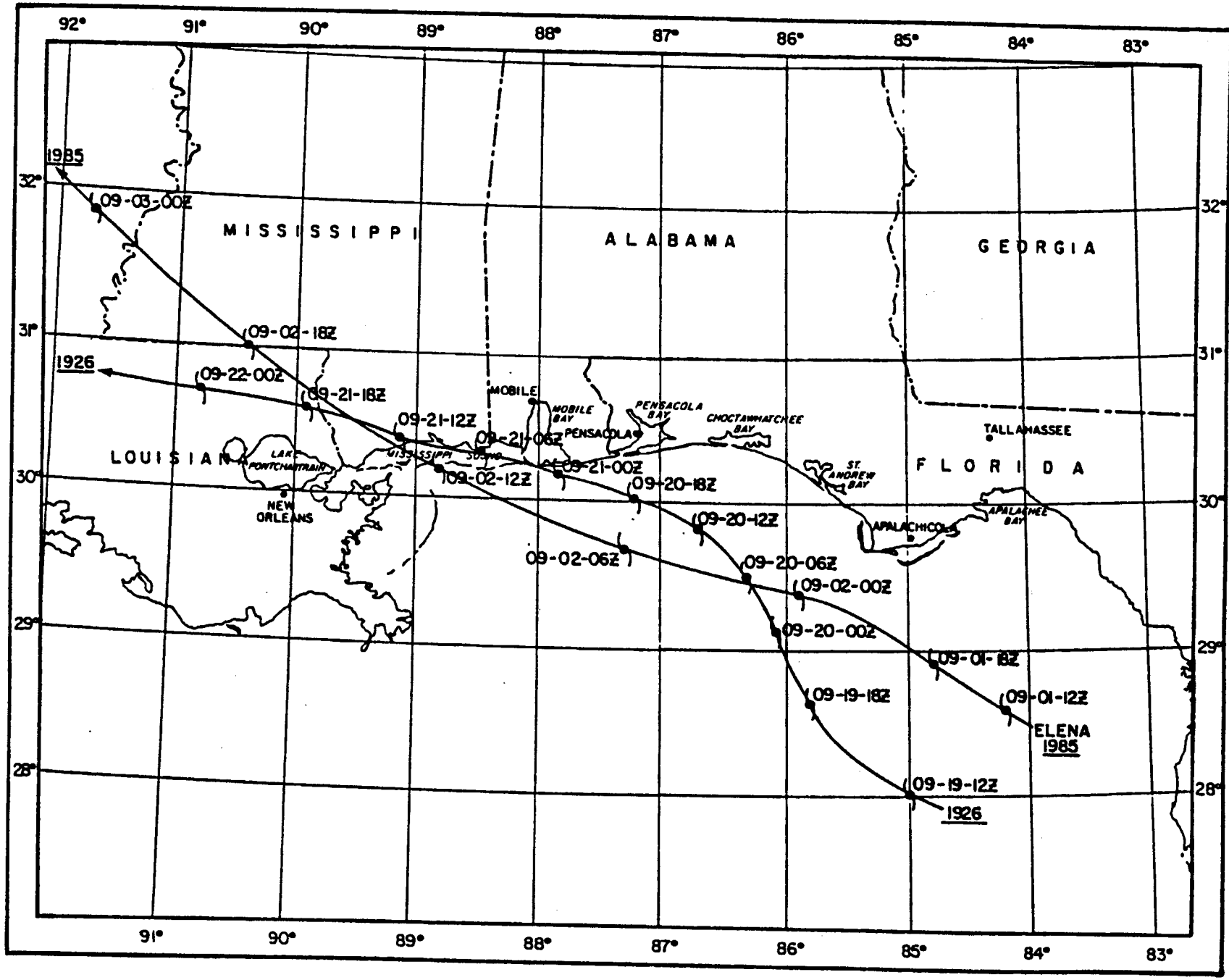
A comprehensive coordination program was established for the Northwest Florida Hurricane Evacuation Study that included state and local emergency management officials and representatives from other organizations having direct responsibilities in hurricane emergencies. A description of the coordination program follows:

a. Interagency

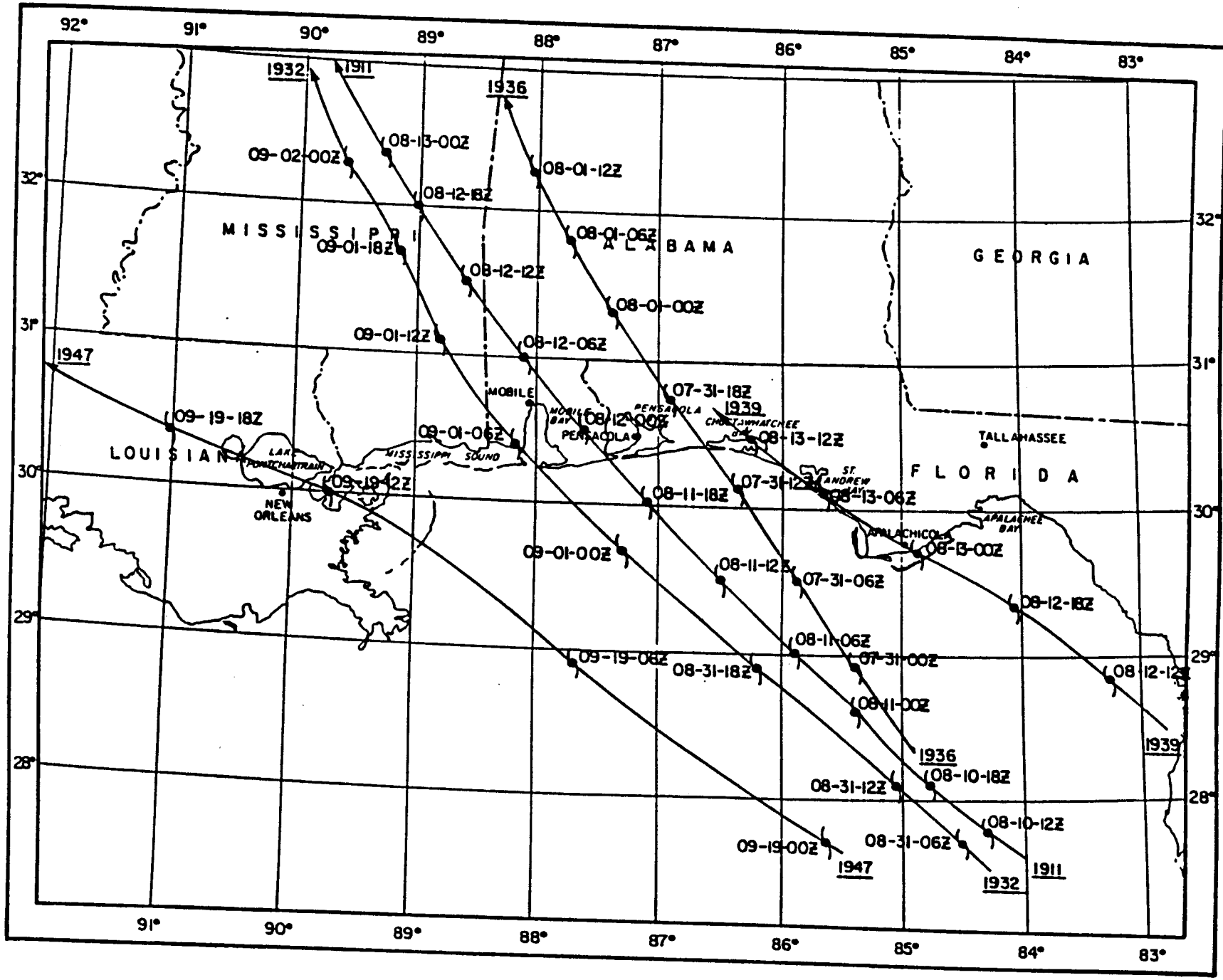
The Florida State Emergency Management Office has an established channel of communication and coordination from the central State offices through Regional Directors to the county Directors of Emergency Management. From the outset, the U.S. Army Corps of Engineers and Federal Emergency Management Agency relied on this established system to coordinate the study effort. All meetings with the counties were coordinated with the State Emergency Management Office. The Mobile District, U.S. Army Corps of Engineers, provided quarterly status reports to the Federal Emergency Management Agency, the Florida State Emergency Management Office, the West Florida Regional Planning Council and the study area Counties.

b. Disaster Preparedness Committees

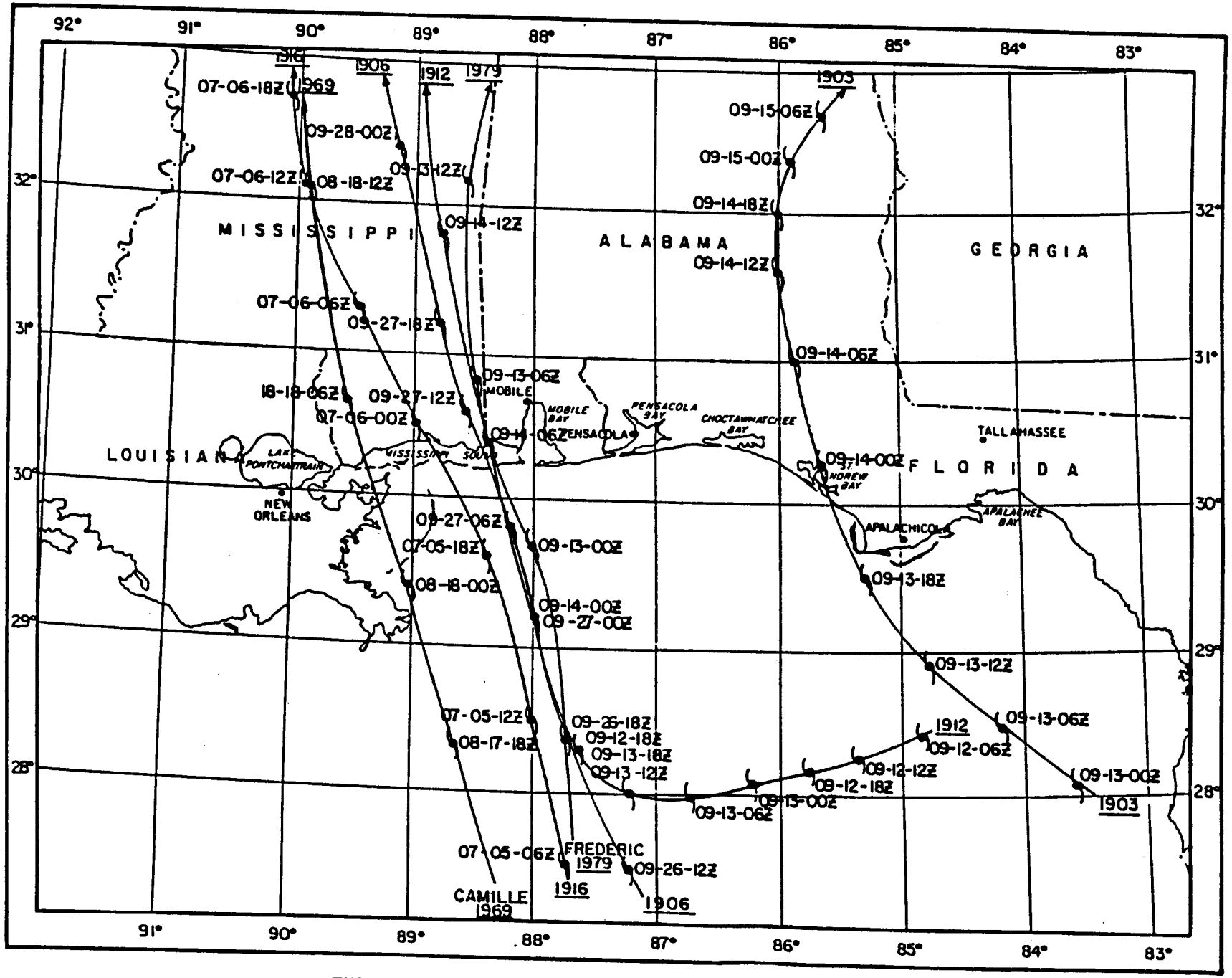
The Disaster Preparedness Committees consisted of Florida State Emergency Management Office officials and county Directors of Emergency Management, and officials of other agencies and organizations, primarily at the county level, who have direct responsibility and authority in some aspect of hurricane emergency operations or planning. These officials represented agencies and organizations that included state and county law enforcement, fire departments, school boards, departments of social services, American Red Cross, and the National Weather Service. The primary purpose of the Disaster Preparedness Committees was to provide important data for the study and to review study products. Meetings were held at major milestones in the study to gather essential information, explain the methodologies and products of the various study analyses and to provide an opportunity to receive comments on the study process.



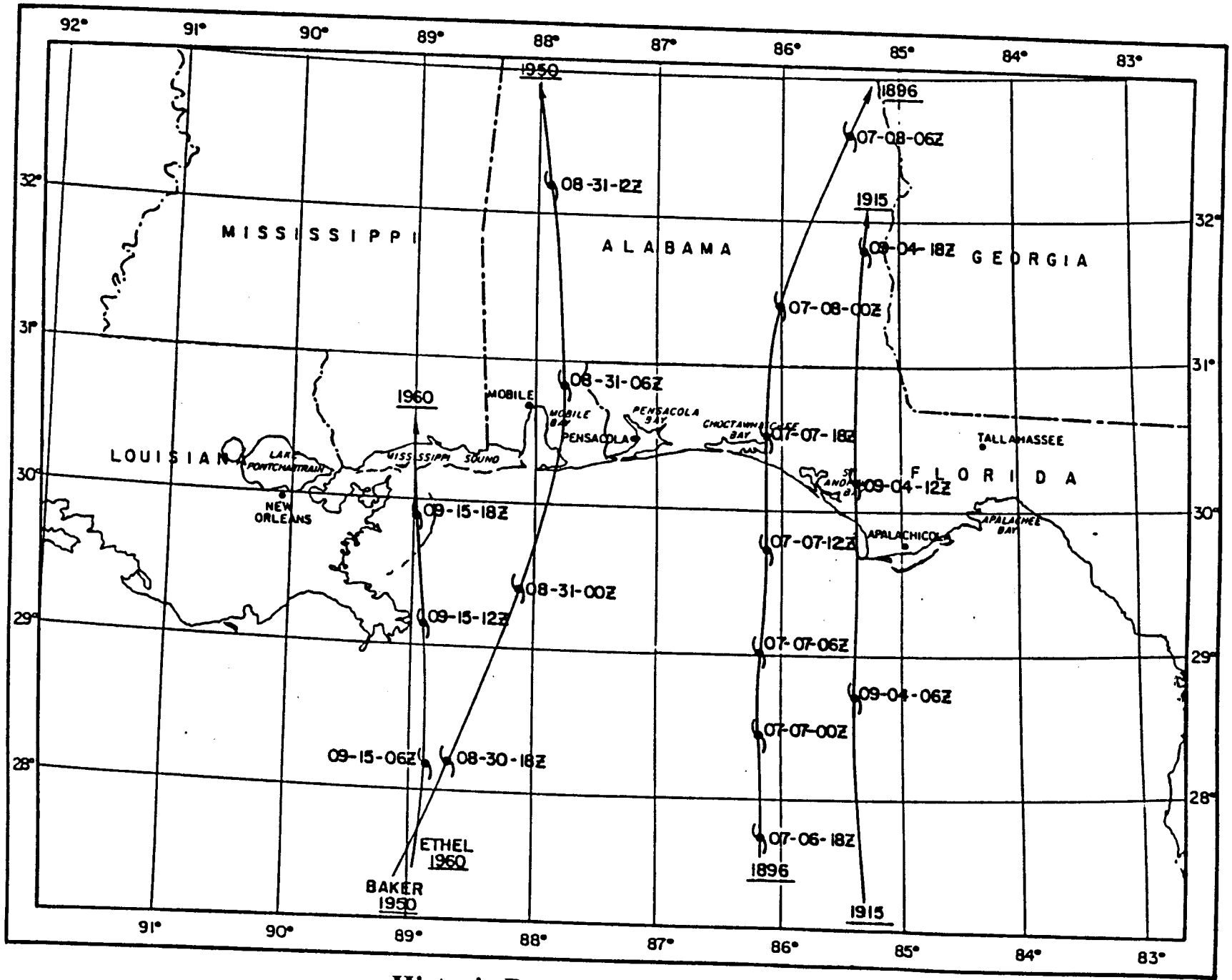
Historic Pensacola storms moving WNW



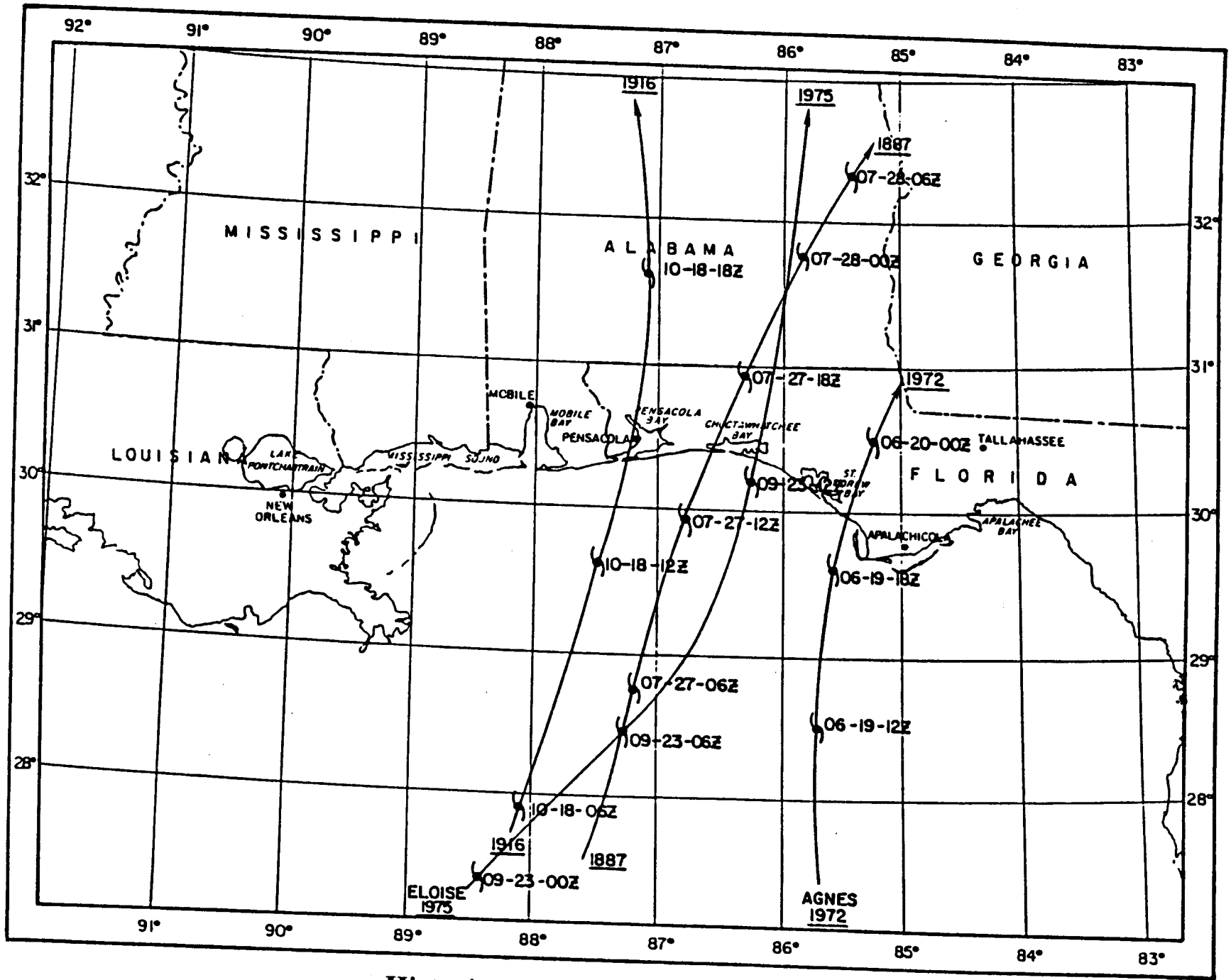
Historic Pensacola storms moving NW



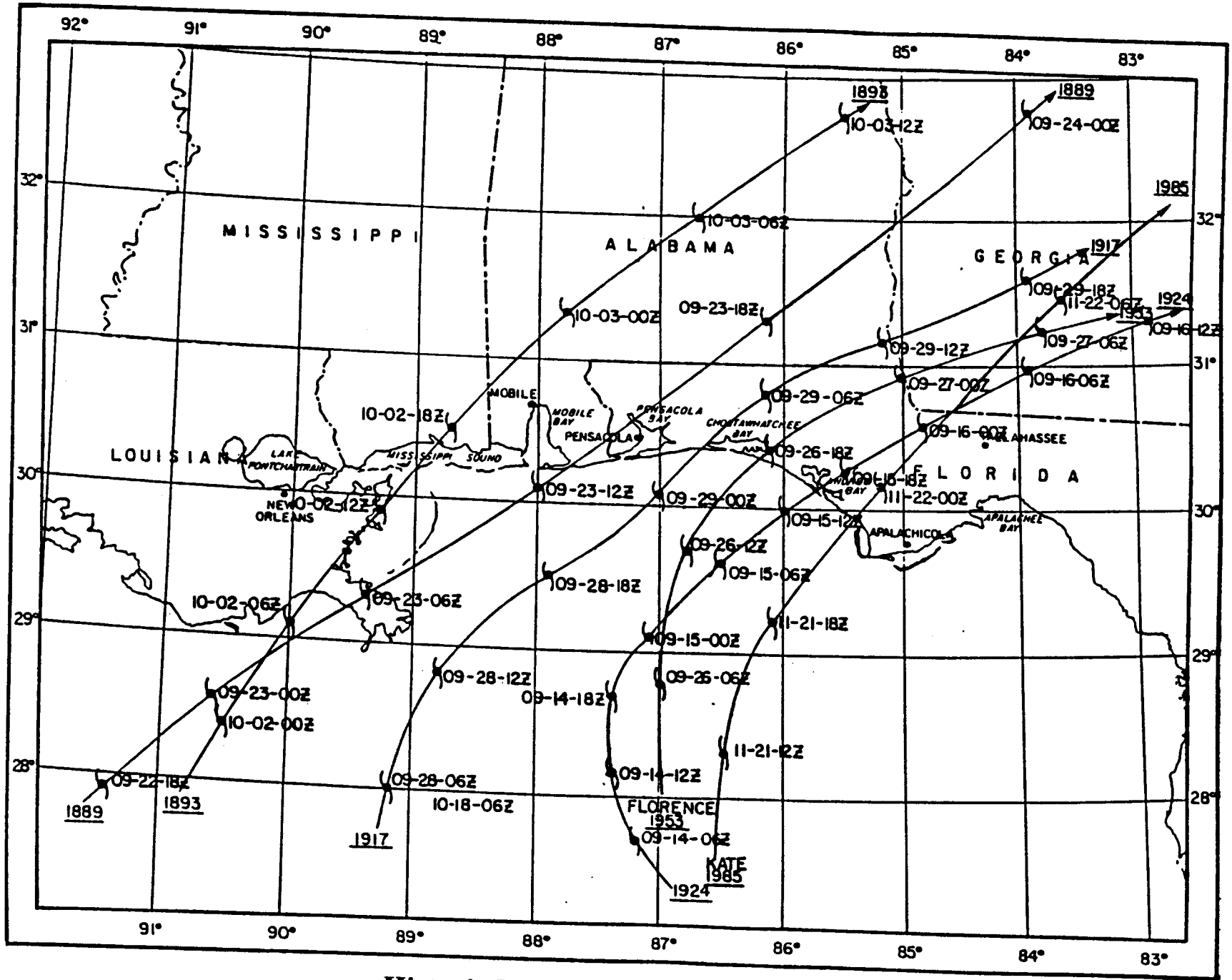
Historic Pensacola storms moving NNW



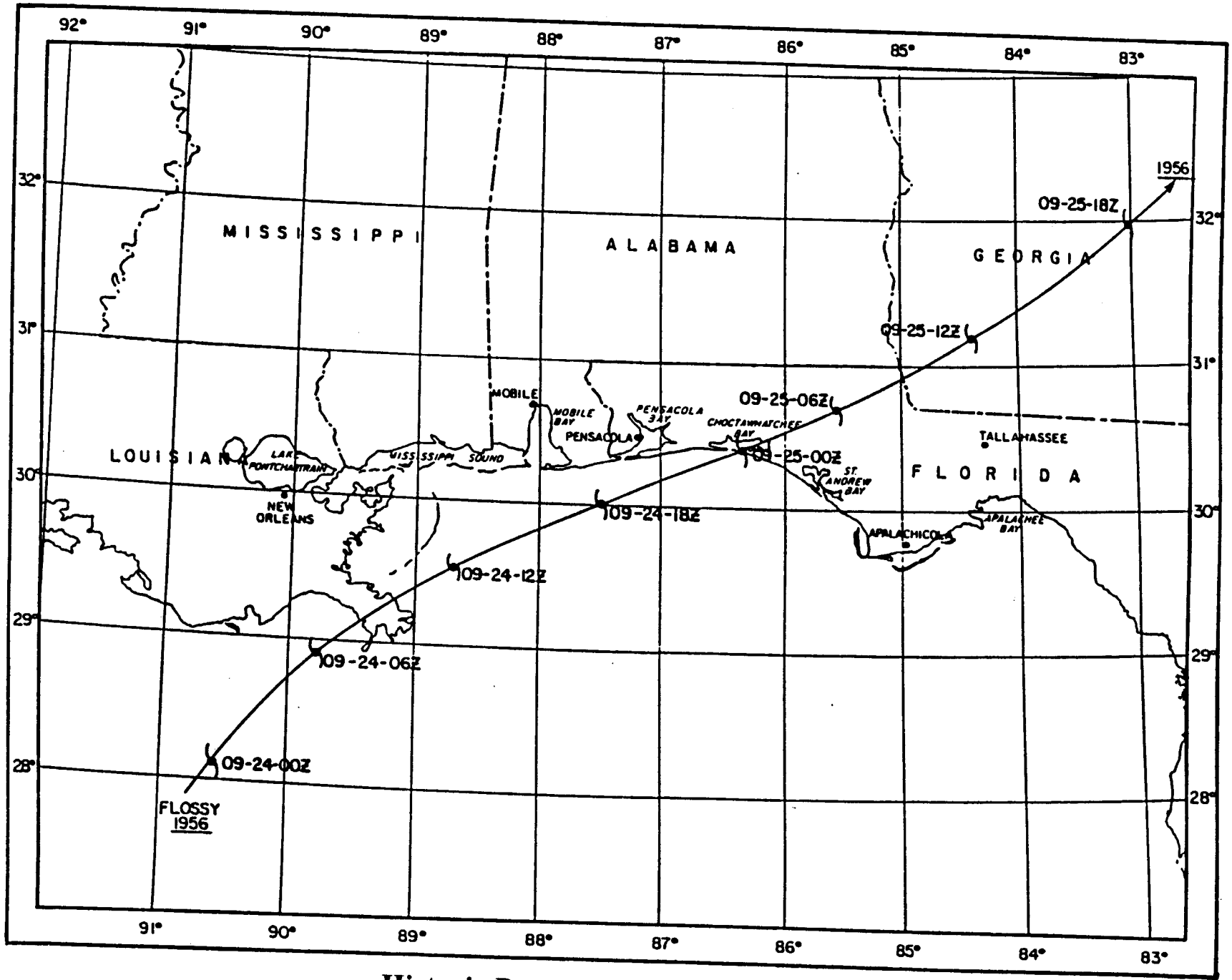
Historic Pensacola storms moving N



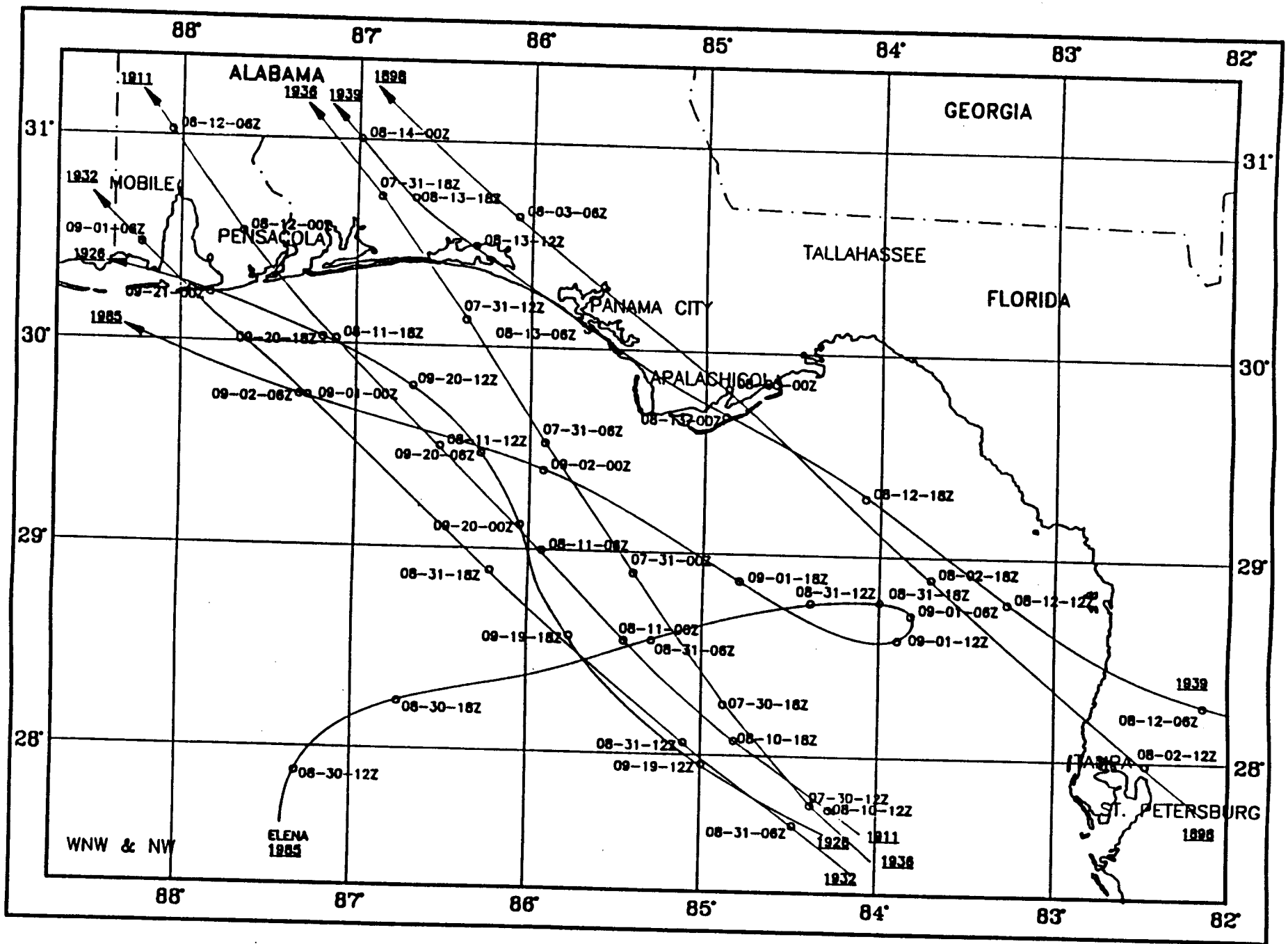
Historic Pensacola storms moving NNE



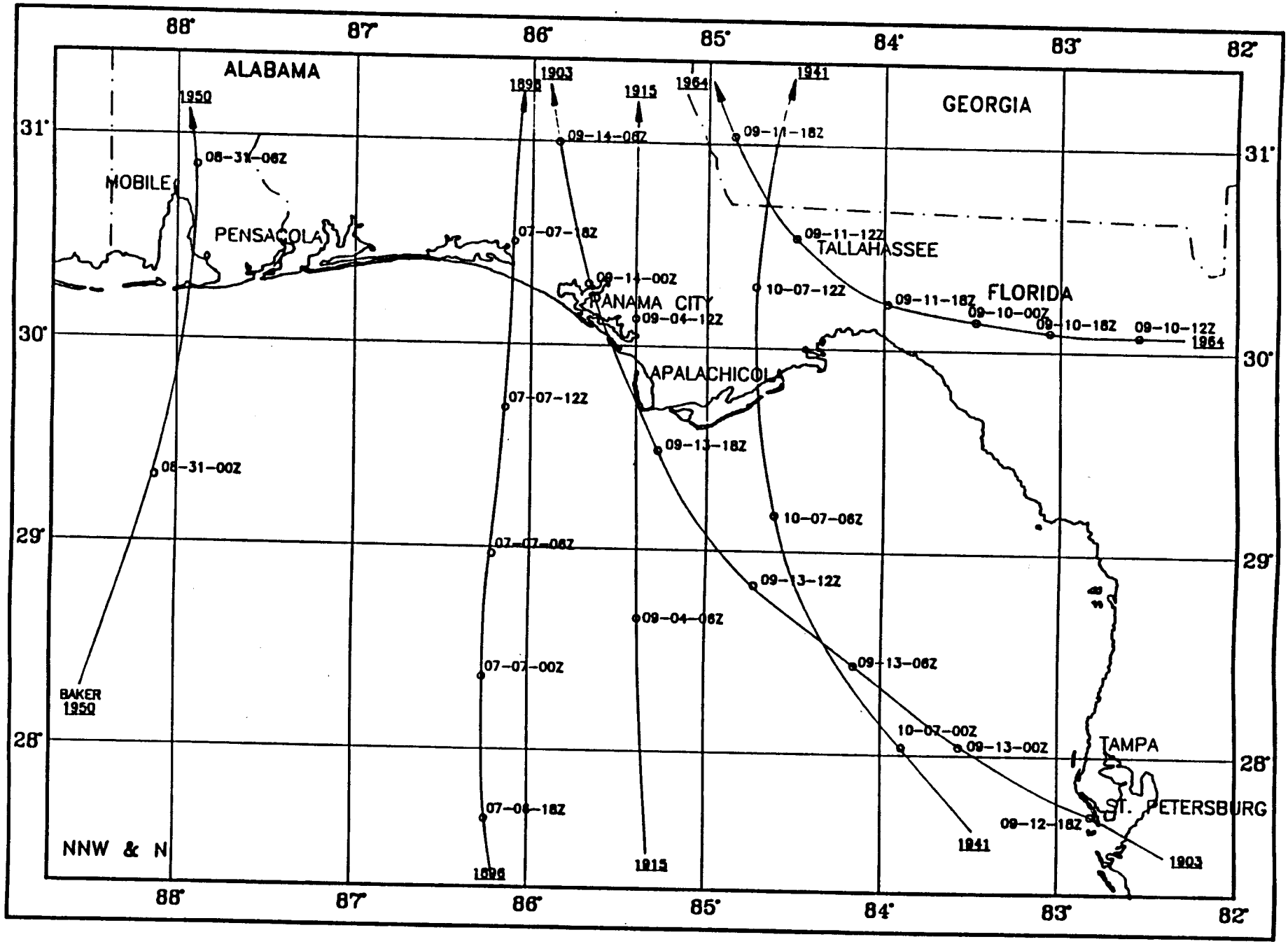
Historic Pensacola storms moving NE



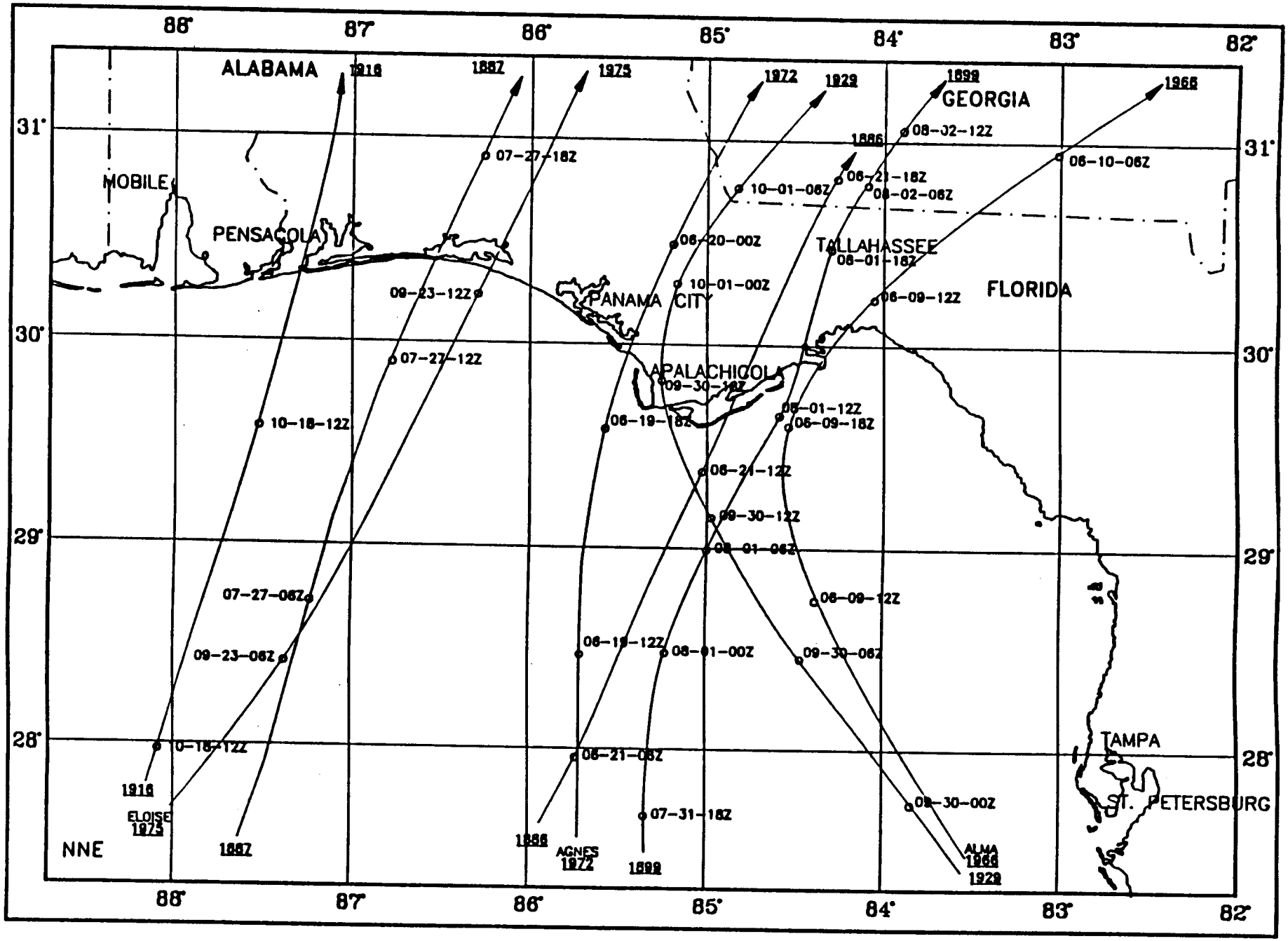
Historic Pensacola storms moving ENE



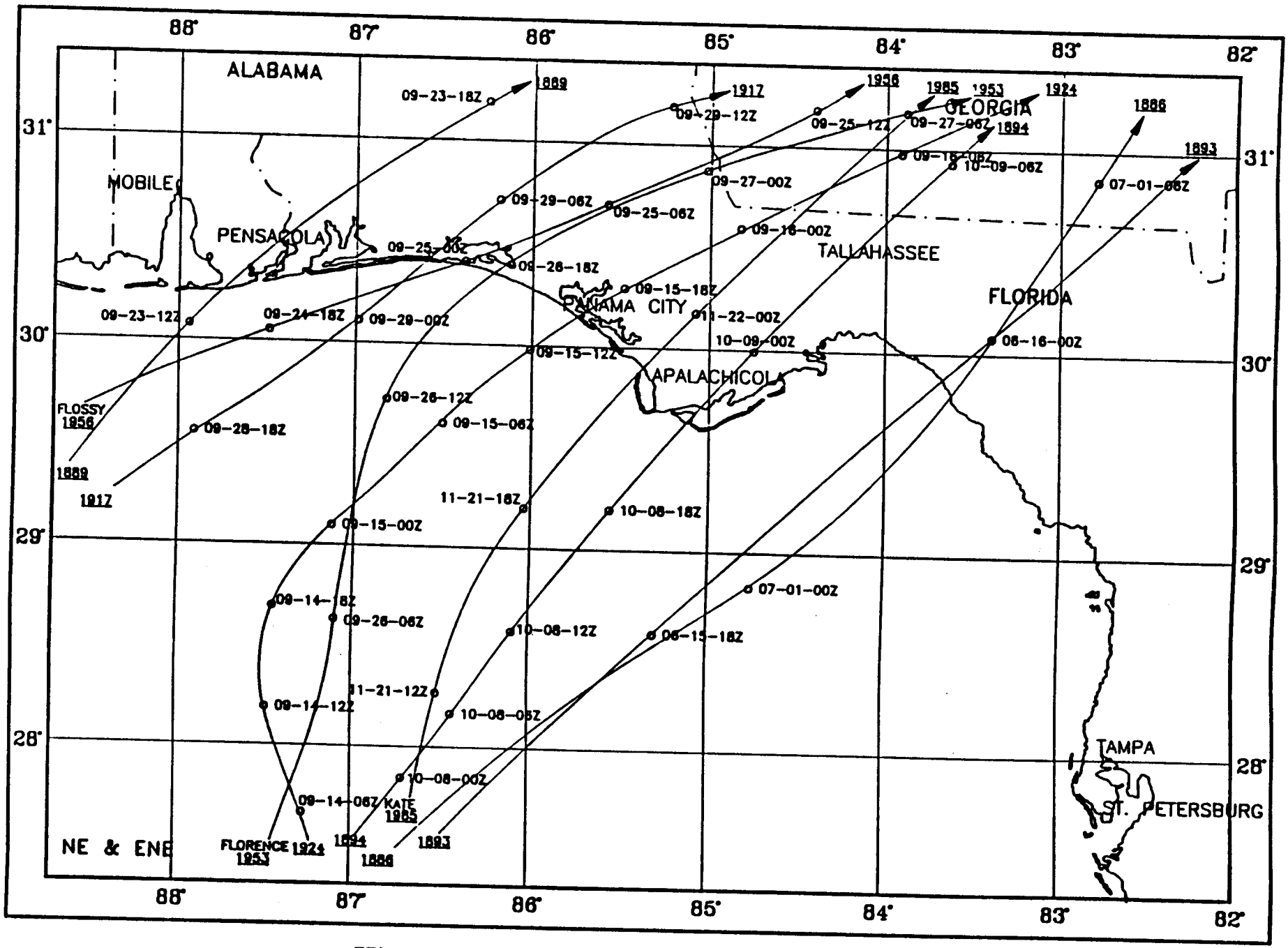
Historic Panama City storms moving WNW & NW



Historic Panama City storms moving NNW & N



Historic Panama City storms moving NNE

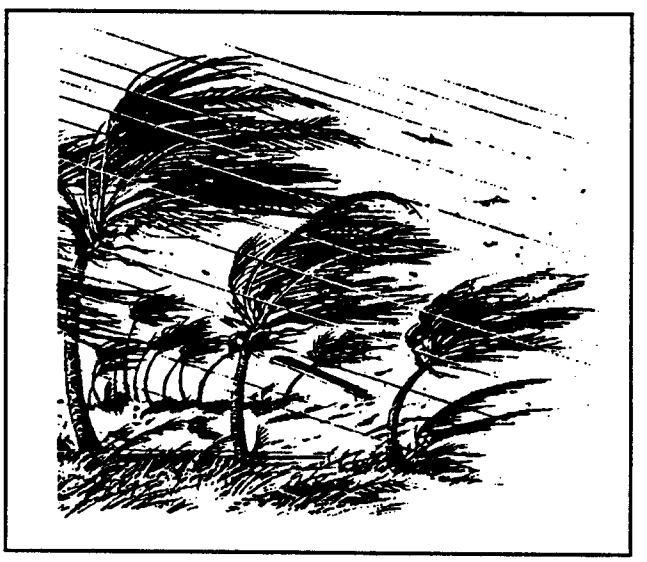


Historic Panama City storms moving NE & ENE

HAZARDS ANALYSIS

CHAPTER TWO - HAZARDS ANALYSIS

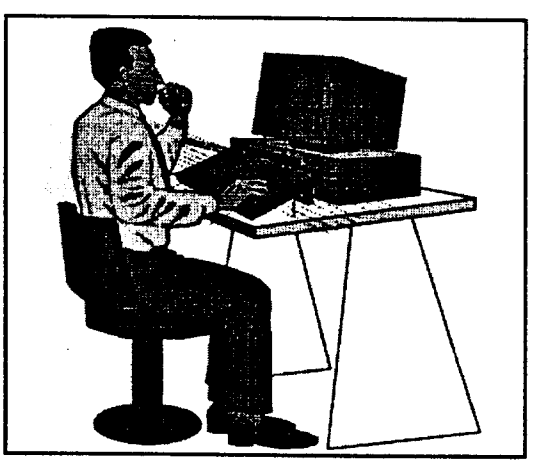
PURPOSE



The purpose of the hazards analysis is to quantify the wind speeds and still-water surge heights for hurricanes that have a reasonable meteorological probability of occurring in the study area. Freshwater flooding from heavy rainfall accompanying hurricanes is an additional hazard which must be considered.

The primary objective of the hazards analysis is to determine the probable worst-case effects from hurricanes of various intensities that could strike the region. For the purposes of this study, the term worst-case is used to describe the peak surges and wind speeds that can be expected at all locations within the study area without regard to hurricane track.

FORECASTING INACCURACIES



The worst-case approach is used in the hazards analysis because of inaccuracies in forecasting the precise tracks and other parameters of approaching hurricanes. The National Hurricane Center has made an analysis of hurricane forecasts to determine the normal magnitude of error. From 1976 to 1990, the average error in the official 24-hour hurricane track forecast was 140 statute miles left or right of the forecast track. The average error in the 12-hour official forecast was 70 miles.

During the same time period, the average error in the official 24-hour wind speed forecast was 15 miles per hour (mph), and the average error in the 12-hour official forecast was 10 mph. Hurricane evacuation decision-makers should note that an increase of 10 to 15 mph can easily raise the intensity value of the approaching hurricane one category on the Saffir/Simpson Hurricane Scale, which is discussed in the following paragraph. Other factors may work to increase apparent hurricane surge heights above the potential heights calculated by the SLOSH model. Because of these forecast and modeling inaccuracies, public officials who are faced with an imminent evacuation should consider preparing for a hurricane at landfall that may be one category above the forecast strength.

SAFFIR/SIMPSON HURRICANE SCALE

One of the earlier guides developed to describe the potential storm surge generated by hurricanes is the Saffir/Simpson Hurricane Scale. It was developed by Herbert Saffir, Dade County, Florida, Consulting Engineer, and Dr. Robert H. Simpson, former Director of the National Hurricane Center. The National Hurricane Center has added a range of central barometric pressures associated with each category of hurricane described by the Saffir/Simpson Hurricane Scale. A condensed version of the Saffir/Simpson Hurricane Scale with the barometric pressure ranges by category is shown in Table 2-1. The related damage potential of each hurricane category is described in Table 2-2.

Table 2-1 Saffir/Simpson Hurricane Scale

	Central Pressure		Winds		Damage
Category	Millibars	Inches	(mph)	(kts)	
1	>980	>28.9	74-95	64-83	Minimal
2	965-979	28.5-28.9	96-110	84-96	Moderate
3	945-964	27.9 - 28.5	111-130	97-113	Extensive
4	920-944	27.2 - 27.9	131-155	114-135	Extreme
5	< 920	<27.2	>155	>135	Catastrophic

Table 2-2 Saffir/Simpson Hurricane Category Damage Scale

Category 1. Winds of 74 to 95 miles per hour. Damage primarily to shrubbery, trees, foliage, and mobile homes. No real wind damage to other structures. Some damage to poorly constructed signs. Low-lying coastal roads inundated, minor pier damage, some small craft in exposed anchorage torn from moorings.

Category 2. Winds of 96 to 110 miles per hour. 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. No major wind damage to buildings. Considerable damage to piers. Marinas flooded. Small craft in unprotected anchorages torn from moorings.

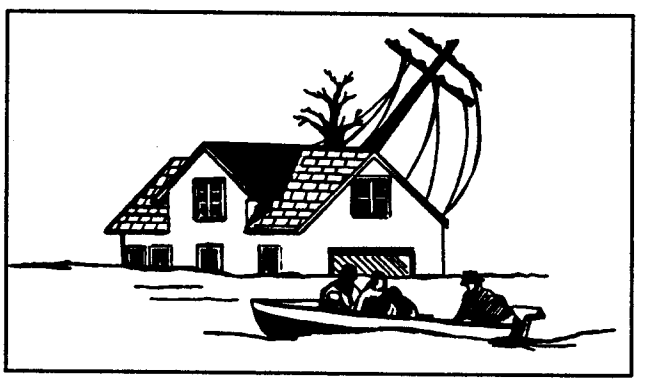
Category 3. Winds of 111 to 130 miles per hour. Foliage torn from trees; large trees blown down. Practically all poorly constructed signs blown down. Some damage to roofing materials of buildings; some window and door damage. Some structural damage to small buildings. Mobile homes destroyed. Serious flooding at coast and many smaller structures near coast destroyed; larger structures near coast damaged by battering waves and floating debris.

Category 4. Winds of 131 to 155 miles per hour. 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. Major damage to lower floors of structures near shore due to flooding and battering by waves and floating debris. Major erosion of beaches.

Category 5. Winds greater than 155 miles per hour. Shrubs and trees blown down; considerable damage to roofs of buildings; all signs down. Very severe and extensive damage to windows and doors. Complete failure of roofs on many residences and industrial buildings. Extensive shattering of glass in windows and doors. Some complete building failures. Small buildings overturned or blown away. Complete destruction of mobile homes.

STORM SURGE

a. Introduction



Various storm events can cause abnormally high water levels along ocean coasts and interior shorelines. These higher than expected water levels, known as storm surges, are generally the result of a synoptic scale meteorological disturbance. Storm surges can affect a shoreline over distances of more than 100 miles; however, there may be significant spatial variations in the magnitude of the surge due to local bathymetric and topographic features. Wind is the primary cause of storm surge. Wind blowing over the surface of the water exerts a horizontal force that induces a surface current in the general direction of the wind. The surface current, in turn, forms currents in subsurface water. In the case of a hurricane, the depth affected by this process of current creation depends upon the intensity and forward motion of the storm. For example, a fast-moving hurricane of moderate intensity may only induce currents to a depth of a hundred feet, whereas a slow moving hurricane of the same intensity might induce currents to several hundred feet. As the hurricane approaches the coastline, these horizontal currents are impeded by a sloping continental shelf, thereby causing the water level to rise. The amount of rise increases shoreward to a maximum level that is often inland from the usual coastline.

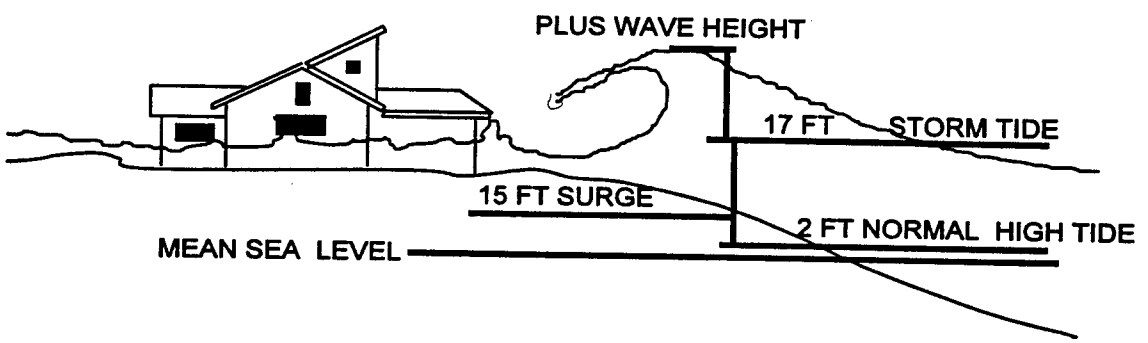
b. Factors Affecting Surge Height

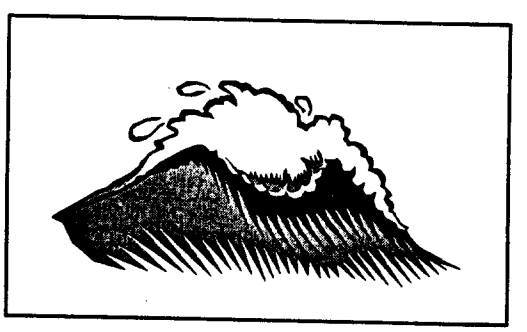
The elevation reached by the storm surge within a coastal basin depends upon the meteorological parameters of the hurricane and the physical characteristics existing within the basin. The meteorological parameters affecting the height of the storm surge include the intensity of the hurricane, measured by the storm-center sea-level pressure, track (path) of the storm, forward speed, and radius of maximum winds. Due to the complementary effects of forward motion and the counterclockwise rotation of the wind field , highest surges from a hurricane usually occur on the northeast quadrant of the storm's track in the region of the radius of maximum winds. This radius, which is measured from the center of the hurricane eye to the location of the highest wind speeds within the storm, can vary from as little as 4 miles to as much as 50 miles or greater. Peak storm surge may vary drastically within a relatively short distance along the coastline depending on the radius of maximum winds and the point of hurricane eye landfall.

The physical characteristics of a basin that influence the surge heights include the basin bathymetry (water depths), roughness of the continental shelf, configuration of the coastline, and natural or man-made barriers. A wide, gently sloping continental shelf or a large bay may produce particularly large storm surges.

c. Total Flood Elevation

Other factors that contribute to the total water height are the initial water level within the basin at the time the hurricane strikes and wave effects. Storm surge is defined as the difference between the observed water level and the normal astronomical tide. Any astronomical tide level above the mean is additive to the storm surge. The timing of the arrival of storm surge is important in that the difference in total flood elevation can be as much as 1 to 2 feet in the study area.





Waves breaking near the shore cause a transport of water shoreward. When there is an increase in wave height water cannot flow back to the sea as rapidly as it came in. This phenomenon, known as "wave setup", increases the water level along the beachfront. Waves will break and dissipate their energy in shallow water. Therefore, a relatively steep offshore beach slope allows large ocean waves to get closer to the shore before breaking and usually promotes larger waves. Wave setup is primarily a concern near the beachfront because waves are generally not transmitted inland of the coastline even if the beach has been overtopped.

THE SLOSH COMPUTER MODEL

a. General

The Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model was developed by the National Weather Service to calculate potential surge heights from hurricanes. The SLOSH model is used for real-time forecasting of surges from approaching hurricanes within selected Gulf and Atlantic coastal basins. In addition to computing surge heights for the open coast, the SLOSH model has the added capability to simulate the routing of storm surge into sounds, bays, estuaries, and coastal river basins, as well as calculating surge heights for overland locations. Significant natural and manmade barriers are represented in the model, and their effects simulated in the calculations of surge heights within a basin.

The SLOSH model is designed for use in an operational mode; that is, for forecast/hindcast runs without controlled, local calibration, or observed winds. This design was selected so that the user would not be forced to estimate unavailable input data. The SLOSH model contains a storm model into which simple, time-dependent meteorological data are input and from which the driving forces of a simulated storm are calculated. These data are as follows:

(1) Central barometric pressure at 6-hour intervals.

(2) Latitude and longitude of storm positions at 6-hour intervals for a 72-hour tract.

(3) The storm size measured from the center (eye) to the region of maximum winds, commonly referred to as the radius of maximum winds. Wind speed is not an input parameter, since the model calculates a windfield for the modeled storm by balancing forces according to meteorological input parameters.

Also required is the height of the water surface well before the storm directly affects the area of interest. This initial height is the observed, quiescent, water surface height occurring about 2 days before storm arrival, including any existing anomalous rise in the water surface. Astronomical high tide was not set in the model.

The values or functions for the coefficients within the SLOSH model are generalized to serve for modeling all storms within all basins and are set empirically through comparisons of computed and observed meteorological and surge height data from numerous historical hurricanes. The coefficients are a function of differing storm parameters and basin characteristics. Calibration of the model based on a single storm event within a basin is avoided since there is no guarantee that the same coefficient values will serve as well for other storms.

b. SLOSH Grid Configuration

The Pensacola SLOSH grid is a telescoping elliptical coordinate system with 92 arcs and 153 radials as shown in figure 2-1. The resolution of the Pensacola grid is approximately .1 square miles per grid square for inland locations and about 1.3 square miles in the open water. The Panama City SLOSH grid is a telescoping hyperbolic coordinate system with 105 arcs and 118 radials as shown in figure 2-2. The resolution of the Panama City grid is approximately .1 square miles per grid square for inland locations and about 2.8 square miles in the open water. The advantage of these grid systems is that they offer good resolution in areas of primary interest, while conserving computer resources and minimizing calculations.

The characteristics of a particular basin are constructed as input data within the model. These characteristics include the topography of inland areas; river basins and waterways; bathymetry of nearshore areas, sounds, bays, and large inland water bodies; significant natural and manmade barriers such as barrier islands, dunes, roads, levees, etc.; and a segment of the continental shelf. The SLOSH model simulates inland flooding from storm surge and permits the overtopping of barriers and flow through barrier gaps.

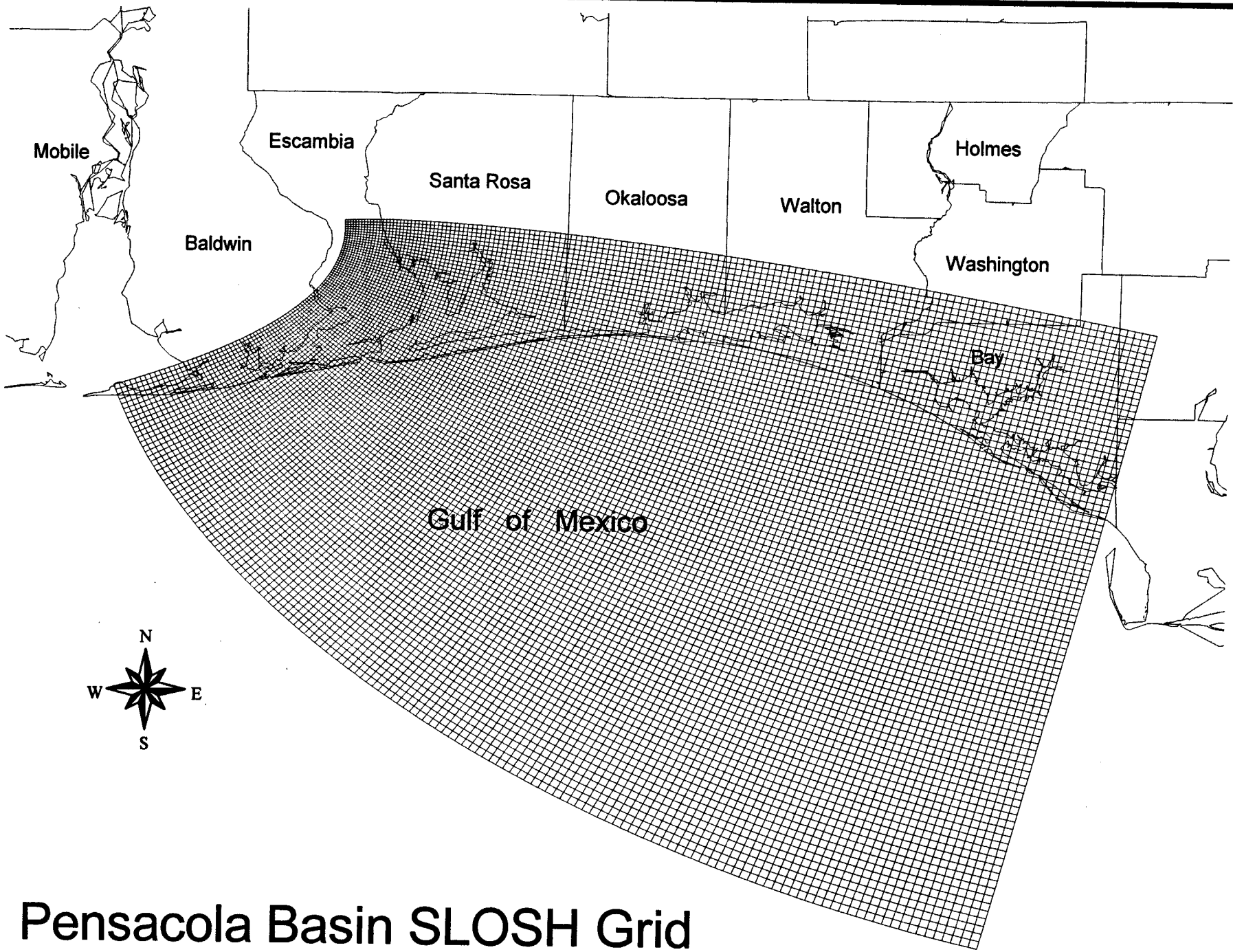
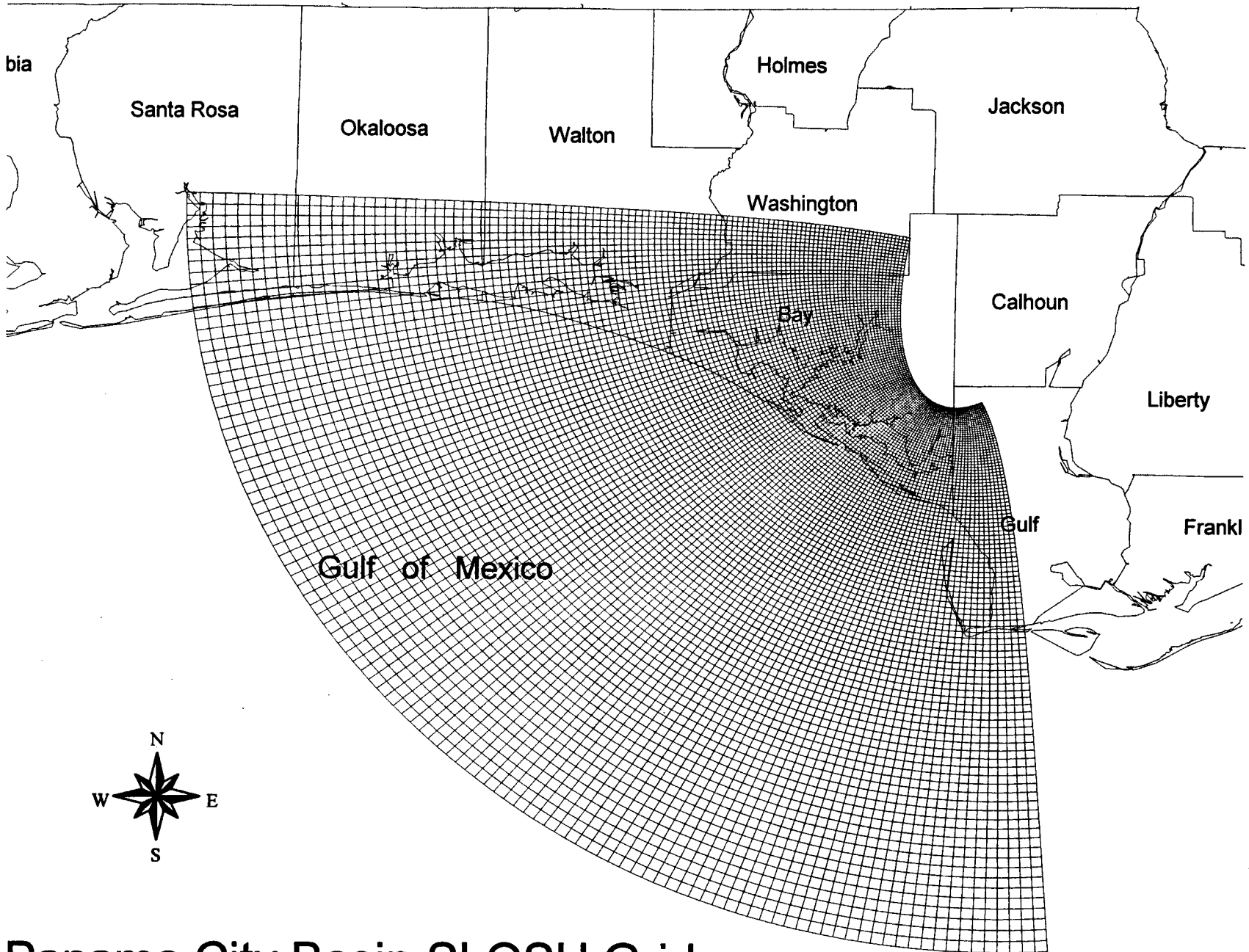


Figure 2-1 Pensacola SLOSH Model Grid



Panama City Basin SLOSH Grid

Figure 2-2 Panama City SLOSH Model grid

c. Verification of the Model

After a SLOSH model has been constructed for a coastal basin, verification experiments are conducted. These experiments are performed as real-time operational runs in which available meteorological data from historical storms are input in the model. These input data consist solely of observed or hindcast storm parameters and an initial observed sea surface height occurring approximately 48 hours before the storm makes landfall or affects the basin. The computed surge heights are compared with those measured from historical storms and, if necessary, adjustments are made to the input or basin data. In instances where the model has given realistic results in one area of a basin, but not in another, closer examination has often revealed inaccuracies in the representation of barrier heights or missing values in bathymetric or topographic charts. When necessary, further analysis and subjective decisions are employed to amend the track or other parameters of the historical storms used in the verification process. The hurricanes used to verify the Pensacola and Panama City SLOSH model were Opal and Erin.

d. Model Output

The SLOSH model output for a modeled storm consists of a tabulated storm history containing hourly values of storm position, speed, direction of motion, pressure drop, and radius of maximum winds; a surface envelope of highest surges; and for preselected grid points, time-history tabulations of values for surge heights, wind speeds and wind directions. Values in the time-history tabulations are 10-minute averages, given every 30 minutes.

The highest water level reached at each location along the coastline during the passage of a hurricane is called the maximum surge. Maximum surges along the coastline do not necessarily occur at the same time. The time of the maximum surge for one location may differ by several hours from the maximum surge that occurs at another location. The SLOSH model determines the highest surge height values calculated for each grid in the model irrespective of the time of occurrence. The datum used in the model is NGVD, formerly known as mean sea level of 1929 (M.S.L.).

THE PENSACOLA MODELING PROCESS

The Pensacola Basin SLOSH model was used to determine the surge heights in Escambia, Santa Rosa, Okaloosa, and Walton counties in Florida. A total of 1440 hypothetical hurricanes were modeled for the Pensacola Basin. The characteristics of the simulated hurricanes were determined from an analysis of historical hurricanes. The parameters selected for the modeled storms were the intensities, forward speeds, approach directions, and radii of maximum winds that are considered to have the highest meteorological probability of occurrence within the region. The parameters are summarized in Table 2-3 and graphically presented on Plates 2-1 through 2-9 at the end of this Chapter. The simulated hurricanes included category 1 through category 5 hurricane intensities and nine approach directions . Forward speeds of 5, 15 and 25 miles per hour were used. The radius of maximum winds specified for all the simulated hurricanes at landfall was 25 miles.

Table 2-3 Pensacola Basin hypothetical storm scenarios.

Direction	Speed (mph)	Intensities	Tracks	Runs	MEOWS
W	5, 15, 25	Cat1-Cat5	11	165	15
WNW	5, 15, 25	Cat1-Cat5	11	165	15
NW	5, 15, 25	Cat1-Cat5	11	165	15
NNW	5, 15, 25	Cat1-Cat5	11	165	15
N	5, 15, 25	Cat1-Cat5	12	180	15
NNE	5, 15, 25	Cat1-Cat5	13	195	15
NE	5, 15, 25	Cat1-Cat5	8	120	15
ENE	5, 15, 25	Cat1-Cat5	9	135	15
E	5, 15, 25	Cat1-Cat5	10	150	15
			TOTAL	1,440	135

After making landfall, most hurricanes weaken because the central pressure and radius of maximum winds increase. This was taken into account in modeling each of the storm tracks. The initial sea surface height set in the Pensacola Basin SLOSH model was 1.25 foot. This initial height, known as tide anomaly, represents the height of the water surface above M.S.L. existing several days in advance of approaching hurricanes. Furthermore, to simulate conditions at high tide, an additional .75 feet was included. Thus all SLOSH runs of hypothetical hurricanes were supplied with initial datums of 2.0 feet M.S.L., and the resulting calculations of storm surge represent conditions at time of high tide.

THE PANAMA CITY MODELING PROCESS

The Panama City SLOSH model was used to determine the surge heights in Bay county in Florida. A total of 1515 hypothetical hurricanes were modeled for the Panama City Basin. The characteristics of the simulated hurricanes were determined from an analysis of historical hurricanes. The parameters selected for the modeled storms were the intensities, forward speeds, approach directions, and radii of maximum winds that are considered to have the highest meteorological probability of occurrence within the region. They are summarized in Table 2-4 and graphically presented on Plates 2-10 through 2-18 at the end of this Chapter. The simulated hurricanes included category 1 through category 5 hurricane intensities and nine approach directions . Forward speeds of 5, 15 and 25 miles per hour were used. The radius of maximum winds specified for all the simulated hurricanes at landfall was 25 miles.

Table 2-4 Panama City hypothetical storm scenarios.

Direction	Speed (mph)	Intensities	Tracks	Runs	MEOWS
W	5, 15, 25	Cat1-Cat5	8	120	15
WNW	5, 15, 25	Cat1-Cat5	9	135	15
NW	5, 15, 25	Cat1-Cat5	10	150	15
NNW	5, 15, 25	Cat1-Cat5	12	180	15
N	5, 15, 25	Cat1-Cat5	13	195	15
NNE	5, 15, 25	Cat1-Cat5	14	210	15
NE	5, 15, 25	Cat1-Cat5	14	210	15
ENE	5, 15, 25	Cat1-Cat5	13	195	15
E	5, 15, 25	Cat1-Cat5	8	120	15
			TOTAL	1,515	135

After making landfall, most hurricanes weaken because the central pressure and radius of maximum winds increase. This was taken into account in modeling each of the storm tracks. The initial sea surface height set in the Panama City SLOSH model was 1.25 foot. This initial height, known as tide anomaly, represents the height of the water surface above M.S.L. existing several days in advance of approaching hurricanes. Furthermore, to simulate conditions at high tide, an additional .75 feet was included. Thus all SLOSH runs of hypothetical hurricanes were supplied with initial datums of 2.0 feet M.S.L., and the resulting calculations of storm surge represent conditions at time of high tide.

MAXIMUM ENVELOPES OF WATER (MEOWS)

The highest surges reached at all locations within the affected area of the coastline during the passage of a hurricane are called the maximum surges for those locations; the highest maximum surge in the affected area is called the peak surge. The location of the peak surge depends on where the eye of a hurricane crosses the coastline, hurricane intensity, the bathymetry of the basin, configuration of the coastline, the approach direction, and the radius of maximum winds. As discussed previously, the peak surge from a hurricane usually occurs to the right of the storm path and within a few miles of the radius of maximum winds.

Due to the inability to precisely forecast the ultimate landfall location, forward speed, approach direction, and other characteristics of a threatening hurricane, the objective of the hazards analysis is to determine the potential peak surges for all locations within the study area. For that purpose, MEOWs are utilized. MEOWs were developed by the National Hurricane Center from an array of peak surges calculated for individual hurricanes that differ only in point of landfall. In this manner, maximum water surface elevations are calculated for a particular class of hurricane defined by approach direction, forward speed, and intensity but independent of the point of landfall.

Initially, 135 MEOWs were developed for the Pensacola and Panama City SLOSH models. These MEOWs consisted of computer printouts showing peak surge values developed for each combination of category, approach speed, and approach direction modeled for the study, without regard to storm track. Therefore, the values contained on these original MEOWs were the peak surge height values for each of the model's grid points regardless of where landfall may have occurred.

The results of the 135 original MEOWs were analyzed to determine which changes in storm parameters (i.e., intensity, approach speed, and approach direction) resulted in the greatest differences in the values of the peak surges for all locations and those that could reasonably be combined to facilitate evacuation decision-making. In most instances, a change in storm category accounted for the greatest change in peak surge heights. With this in mind, careful consideration was given to the impacts of the various combinations of approach speeds, approach directions, and Saffir/Simpson categories on hurricane evacuation planning and decision-making. To simplify these processes, the National Hurricane Center was asked to compile additional MEOWs.

The National Hurricane Center subsequently created an additional layer of MEOWs (MEOWs of the MEOWs, or MOMs) eliminating consideration of hurricane approach speed and direction but maintaining the separation of categories 1, through 5 storms. The MOM elevations are shown on Plates 2-19 through 2-28 at the end of this Chapter. It was from those MOMs that the hurricane surge maps, shown on Plates 2-29 through 2-33 were developed. Those inundation maps depict maximum storm surge heights that could be generated by the different storm intensities, without regard to approach speed, direction, or track.

ADJUSTMENTS TO SLOSH MODEL VALUES

The surge height values contained in the MOMs represent the water surface elevations produced by the driving forces of the modeled hurricanes in combination with the 1.25-foot tide anomaly and a .75 high tide condition resulting in a 2.0 foot water height at the onset of the storm.

TIME-HISTORY POINT DATA

The time-history information produced by the SLOSH model includes still-water surge heights, wind speeds, and wind direction at 30-minute intervals for 72 hours. Time history points were chosen to coincide with critical locations identified by county Emergency Management Directors for their respective jurisdictions. They are located at low-lying roads and bridges that would be critical to an evacuation, at potentially vulnerable population centers, or at significant natural or manmade barriers. Figures 2-3 thru 2-7 show the location of time history points for each coastal County. Tables 2-5 through 2-9 show the maximum surge heights for each time history point for the category 1 to the category 5 hurricane.

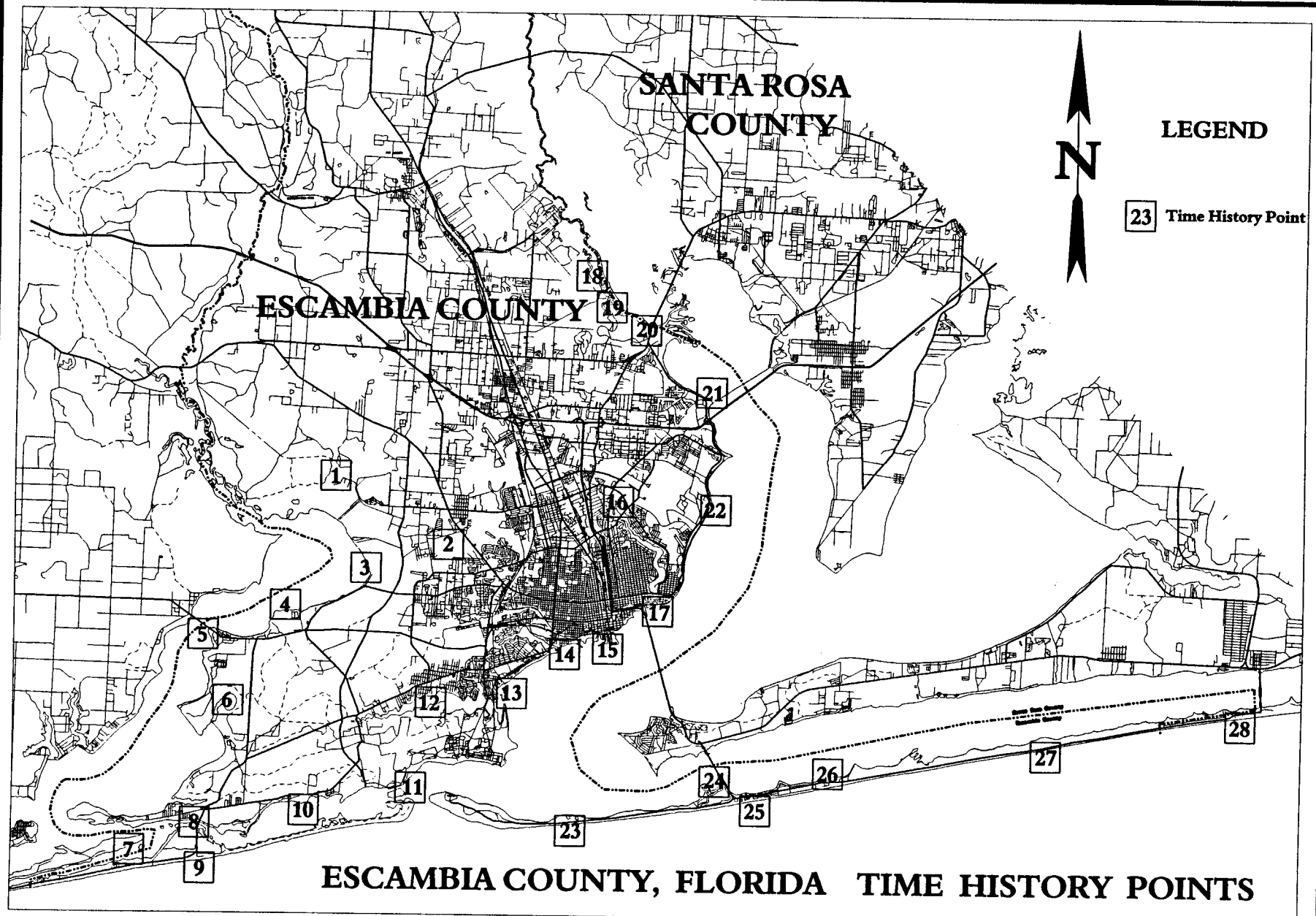
The purpose of the time-history data is to determine the pre-landfall hazards distances for each of the counties within the study area. Pre-landfall hazards distance is the distance from the eye of an approaching hurricane to each jurisdiction at the time an evacuation would be curtailed by hazardous weather conditions. This distance must be accounted for in timing evacuation decision-making. For the Northwest Florida Hurricane Evacuation Study, two specific conditions were evaluated: the arrival of sustained gale-force winds (34-knot sustained wind speed, 1-minute average) and the onset of storm surge inundation of low-lying roads, bridges, or other critical areas. The first of these two conditions to occur determines the pre-landfall hazard distance.

The time of arrival of sustained tropical storm winds is one selected goal for completing an evacuation because high-profile vehicles and vehicles pulling campers or boats could easily be overturned, especially on high-rise bridges. Such an accident would most certainly cripple or halt traffic flow on that evacuation route. That arrival of sustained tropical force winds is also the time, under the majority of hurricane threats, when heavy rainfall begins. Generally, one-half of the total amount of rainfall received from a hurricane occurs from the arrival of sustained tropical storm winds until the eye reaches the coastline.

Storm surge inundation is the other condition limiting evacuation, but should not be a significant factor in most of the study area prior to the arrival of sustained tropical storm winds. The lowest roadway elevations in the study area should be considered when determining the pre-landfall hazards distance. As discussed in the section above, however, **evacuation decision-making officials should be aware that the coincidental occurrence of astronomical high tide and rising storm surge could cause moderate flooding in low-lying areas, particularly on causeways, prior to the arrival of sustained tropical storm winds.**

Table 2-5 Escambia County Time History Points

TIME HISTORY POINT	NAME	SURGE HEIGHTS ABOVE M.S.L. BY STORM CATEGORY HURRICANE EVENT CAT1	CAT2	CAT3	CAT4	CAT5	USGS QUAD
1	Saufley	4.5	6.1	8.9	16.1	21.0	West Pensacola
2	Bellview	DRY	DRY	DRY	15.0	21.8	West Pensacola
3	Avondale	4.3	5.8	8.7	15.7	20.6	West Pensacola
4	Dog Track	4.1	5.7	8.7	15.6	20.5	Lillian
5	Lillian	3.9	5.3	9.7	14.8	19.0	Lillian
6	Bronson	3.7	5.3	11.0	17.0	20.4	Perdido Bay
7	Perdido	3.4	7.0	13.3	16.8	19.6	Perdido Bay
8	Innerarty	4.5	7.7	12.7	16.8	20.2	Perdido Bay
9	Johnson Beach	5.6	9.1	12.6	16.5	19.4	Perdido Bay
10	Seaglades	4.8	9.7	12.8	16.5	20.0	Fort Barrancas
11	Naval Air Station (N.A.S)	5.1	9.2	12.7	16.0	19.9	Fort Barrancas
12	Gulf Beach	4.7	9.1	13.0	16.2	19.2	Fort Barrancas
13	Warrington	3.9	8.3	12.2	15.3	18.9	West Pensacola
14	Bayou Chico	3.8	8.3	12.1	15.2	18.7	Pensacola
15	Main Street	3.6	7.9	11.5	14.8	18.1	Pensacola
16	Bayou Texar	4.1	8.5	12.1	15.4	19.8	Pensacola
17	Bay Bridge, North	3.4	7.5	11.1	14.5	17.6	Pensacola
18	Clear Creek (Solutia)	5.0	9.1	13.0	16.4	20.2	Pace
19	Thompson Bayou (Gulf Power)	4.8	9.1	13.0	16.4	19.9	Pace
20	Escambia Rivier (near UWF)	4.8	9.0	13.0	16.3	19.6	Pace
21	Lora Point (near I-10)	4.1	8.4	12.4	15.6	18.7	Pace
22	Gaberrone	3.6	7.8	11.8	15.0	17.9	Pensacola
23	Fort Pickens	5.2	8.4	11.7	14.7	18.0	Gulf Breeze
24	Sabine	3.4	7.9	11.8	15.3	18.6	Gulf Breeze
25	Pensacola Beach	5.1	8.3	11.5	15.0	18.1	Gulf Breeze
26	Sugar Bowl	3.1	6.4	12.2	16.0	18.9	Oriole Beach
27	Park Srvs	5.1	8.1	11.3	15.6	18.4	South of Holley
28	Wasteplant	5.2	8.0	11.3	14.1	17.4	Holley


SANTA ROSA COUNTY
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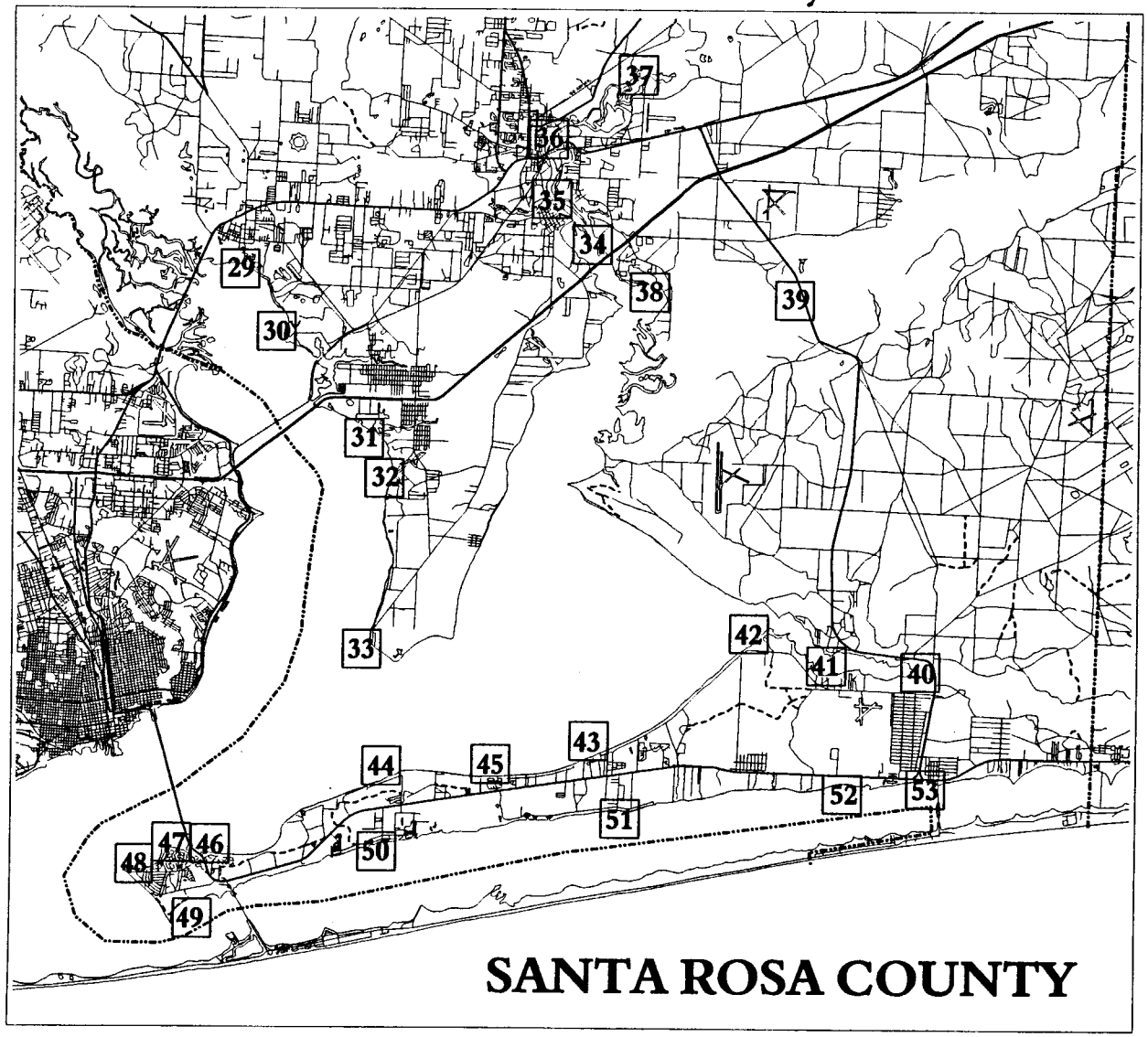
ESCAMBIA COUNTY, FLORIDA TIME HISTORY POINTS

Figure 2-3

Table 2-6 Santa Rosa County Time History Points

TIME HISTORY POINT	NAME	SURGE HEIGHTS ABOVE M.S.L. BY STORM CATEGORY HURRICANE EVENT CAT1	CAT2	CAT3	CAT4	CAT5	USGS QUAD
29	Escambia Bayou (Florida Town)	4.9	9.1	13.1	16.4	19.5	Pace
30	Fishermans Point (Cytec)	4.7	8.9	12.9	16.0	19.1	Pace
31	Indian Bayou (Avalon)	4.5	8.1	12.1	15.4	18.5	Milton South
32	Trout Bay	4.3	8.0	11.9	15.1	18.2	Milton South
33	Garcon Point	3.3	7.5	11.3	14.5	17.6	Garcon Point
34	Blackwater River & I-10	4.0	7.1	11.5	14.7	18.3	Milton South
35	Blackwater River near Bagdad	4.1	7.1	10.5	14.7	18.5	Milton South
36	Blackwater River near Milton	4.2	7.1	10.6	14.8	18.6	Milton North
37	Cooper Basin (Paradise Island)	4.4	6.4	9.2	12.3	12.6	Harold
38	Ward Basin	4.0	7.4	11.5	14.8	18.2	Ward Basin
39	Yellow River Bridge, SR 87	4.0	5.5	10.0	13.6	16.6	Ward Basin
40	East River Bridge	4.7	7.1	11.1	13.5	16.5	Navarre
41	Holley	4.6	7.3	11.6	15.2	18.3	Holley
42	Tom Kin Bayou	4.1	7.2	11.1	14.4	17.5	Holley
43	Midway	3.4	7.1	10.7	14.0	17.2	Garcon Point
44	Redfish Point	3.1	7.2	10.9	14.1	17.4	Garcon Point
45	Redfish Cove	3.1	7.2	10.8	13.9	17.3	Garcon Point
46	Butcherpen Cove	3.3	7.3	10.9	14.3	17.3	Gulf Breeze
47	Bay Bridge, South	3.4	7.5	11.1	14.5	17.6	Gulf Breeze
48	Old Navy Cove	3.4	7.6	11.1	14.5	17.6	Gulf Breeze
49	English Navy Cove	3.4	7.9	11.9	15.3	18.5	Gulf Breeze
50	Oriole Beach	3.0	6.5	12.5	17.2	20.4	Oriole Beach
51	Woodlawn Beach	3.0	5.8	12.3	17.6	19.9	Holley
52	Santa Rosa Sound	3.3	5.7	11.6	15.4	18.7	Holley
53	Navarre Bridge	3.4	5.5	12.8	14.7	18.0	Navarre



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SANTA ROSA COUNTY, FLORIDA

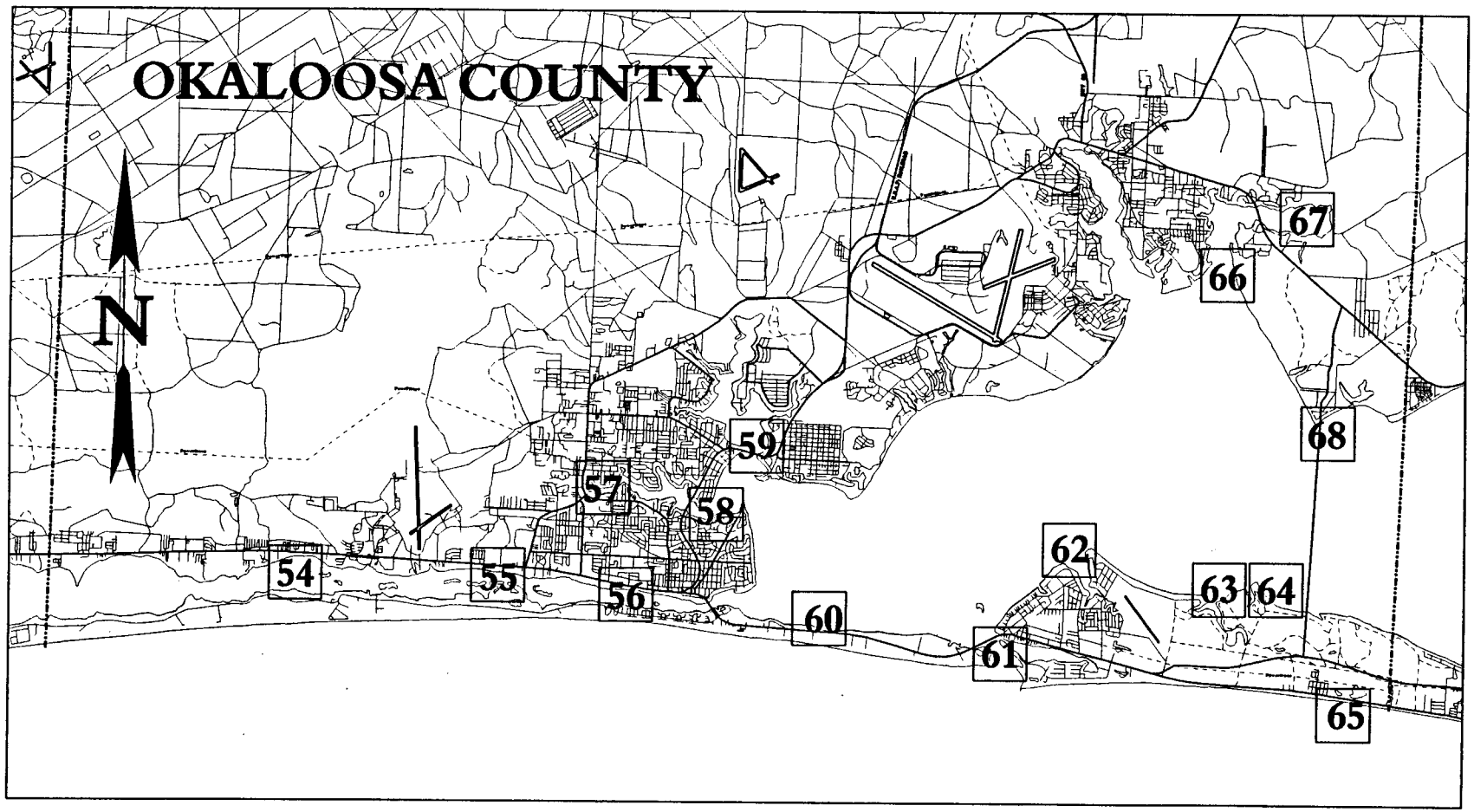
TIME HISTORY POINTS

Figure 2-4

Table 2-7 Okaloosa County Time History Points

TIME HISTORY POINT	NAME	SURGE HEIGHTS ABOVE M.S.L. BY STORM CATEGORY HURRICANE EVENT CAT1	CAT2	CAT3	CAT4	CAT5	USGS QUAD
54	Santa Rosa Sound/Florosa	3.6	5.2	10.8	15.4	18.0	Mary Ester
55	Santa Rosa Sound near Mary Ester	3.3	4.8	9.9	15.3	17.2	Mary Ester
56	Santa Rosa Sound near City Hall	3.6	5.3	8.7	14.5	17.1	Mary Ester
57	Gap Creek	4.4	6.9	9.4	16.0	18.3	Mary Ester
58	Cinco Bayou	4.2	6.4	8.8	14.4	17.4	Fort Walton Beach
59	Garnier Bayou (near EOC)	4.1	6.5	8.7	14.4	17.7	Fort Walton Beach
60	Choctawhatchee Bay	3.7	5.7	7.4	13.8	16.8	Fort Walton Beach
61	East Pass	4.9	8.0	11.6	13.5	16.7	Fort Walton Beach
62	Joe's Bayou	3.3	5.2	6.7	12.9	15.8	Destin
63	Indian Bayou	3.1	4.7	6.2	12.2	15.0	Destin
64	Piney Point	3.2	4.8	6.2	12.0	14.8	Destin
65	Crystal Point	5.1	8.2	11.3	14.0	17.0	Destin
66	Mouth of Rocky Bayou	3.7	5.6	7.4	13.1	16.1	Destin
67	Upper Rocky Bayou	4.3	6.6	7.9	13.4	16.4	Niceville
68	White Point	3.3	5.0	6.4	12.2	14.9	Destin

Northwest Florida Hurricane Evacuation Study



OKALOOSA COUNTY, FLORIDA
TIME HISTORY POINTS

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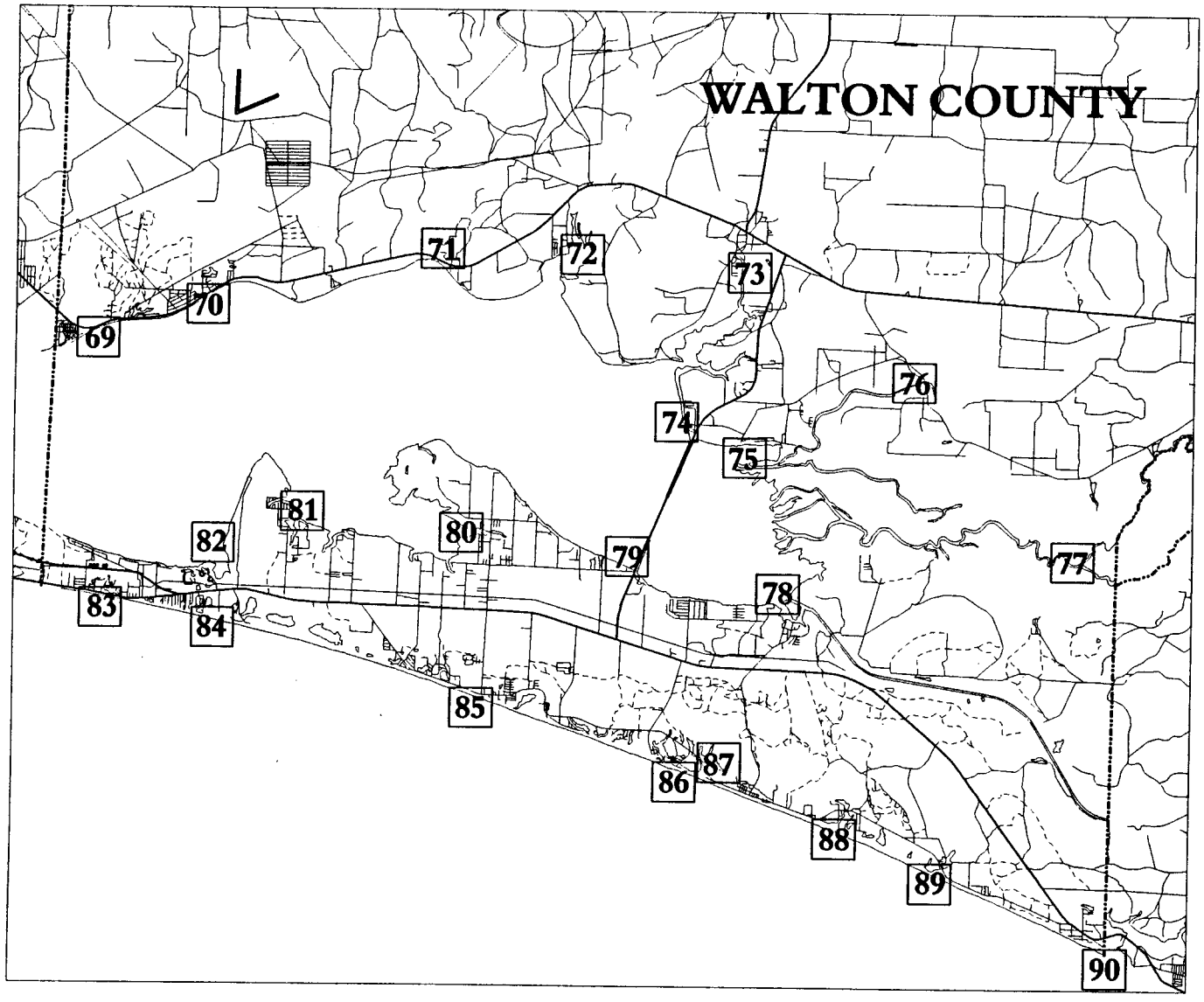
57 Time History Point

Figure 2-5

Figure 2-5

Table 2-8 Walton County Time History Points

TIME HISTORY POINT	NAME	SURGE HEIGHTS ABOVE M.S.L. BY STORM CATEGORY HURRICANE EVENT CAT1	CAT2	CAT3	CAT4	CAT5	USGS QUAD
69	Villa Tasso	3.2	4.9	6.1	11.6	14.5	Choctaw Beach
70	Choctaw Beach	3.2	4.8	6.2	11.6	14.3	Choctaw Beach
71	Basin Bayou	3.7	5.5	7.5	11.2	14.1	Freeport
72	Alaqua Bayou/Portland	4.1	5.7	7.8	11.3	13.6	Freeport
73	LaGrange Bayou/Freeport	4.5	6.4	8.0	11.5	15.5	Freeport
74	Wheeler Point	3.6	4.9	6.4	10.8	13.6	Freeport
75	Jolly Bay	3.5	4.6	6.5	10.7	13.5	Freeport
76	Black Creek @ St. RD. 81	3.6	5.0	6.5	10.3	12.5	Bunker
77	Choctawhatchee River	3.2	4.2	5.7	9.7	13.1	Bunker
78	Tucker Bayou	3.4	4.6	6.5	10.7	13.6	Bunker
79	Bay Bridge: US331&SR83	3.4	4.6	6.1	10.7	13.6	Freeport
80	Santa Rosa Beach	3.5	4.4	5.8	10.9	13.6	Freeport
81	Mack Bayou	3.1	4.3	5.7	11.2	13.9	Choctaw Beach
82	Horseshoe Bayou	3.2	4.7	6.1	11.8	14.6	Choctaw Beach
83	Miramar Beach	5.1	8.1	11.2	14.0	16.7	Miramar Beach
84	Gulf Pines	5.1	8.1	11.2	13.9	16.6	Miramar Beach
85	Dune Allen Beach	5.0	8.0	11.0	13.9	16.5	Grayton Beach
86	Grayton Beach	5.0	7.9	10.8	13.8	16.5	Grayton Beach
87	Western Lake	2.0	2.0	10.5	15.2	17.5	Grayton Beach
88	Eastern Lake	5.3	8.4	12.0	16.1	19.4	Point Washington
89	Camp Creek	5.3	8.4	11.8	16.2	19.9	Point Washington
90	Powell Lake	5.4	8.8	12.1	14.2	17.1	Seminole Hills



Northwest Florida
Hurricane Evacuation Study

LEGEND

N

78 Time History Point

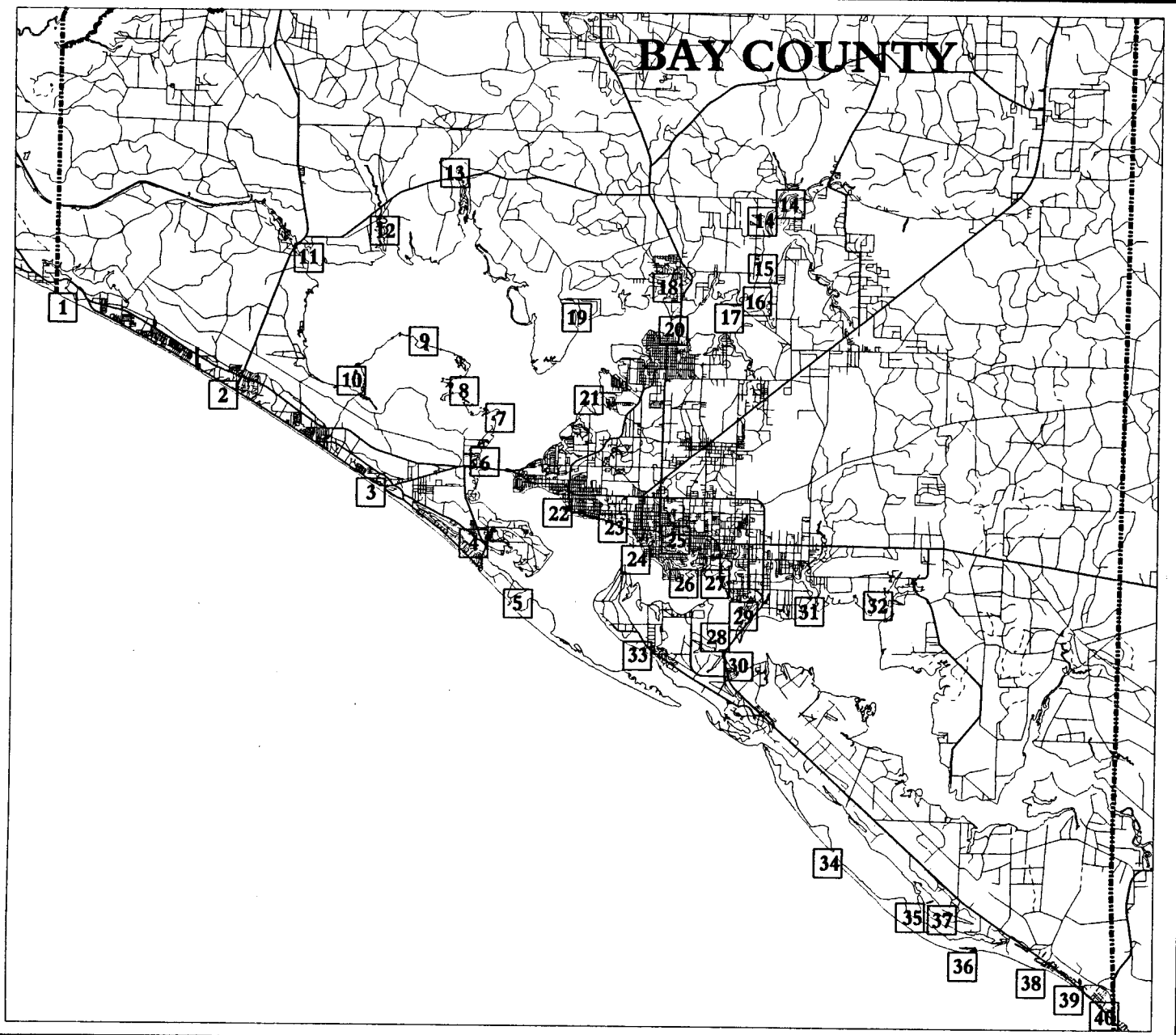
WALTON COUNTY,
FLORIDA
TIME HISTORY
POINTS

Figure 2-6

Figure 2-6

Table 2-9 Bay County Time History Points

TIME HISTORY POINT	NAME	SURGE HEIGHTS ABOVE M.S.L. BY STORM CATEGORY HURRICANE EVENT CAT1	CAT2	CAT3	CAT4	CAT5	USGS QUAD
1	Phillips Inlet	5.3	8.5	11.4	14.1	17.2	Seminole Hills
2	The "Y" (Lullwater Beach)	5.1	8.2	11.2	14.0	16.9	Laguna Beach
3	Middle Beach	5.1	8.1	11.1	13.9	16.7	Panama City Beach
4	Grand Lagoon	5.3	7.9	10.4	13.2	16.9	Panama City Beach
5	The Pass	5.2	8.3	11.4	14.3	16.6	Beacon Beach
6	Hathway Bridge	4.4	7.2	9.5	13.2	16.3	Panama City Beach
7	Shell Point	4.5	7.0	10.0	13.6	16.8	Panama City
8	Harrison Bayou	4.6	7.2	10.2	13.9	17.2	Panama City Beach
9	Basin Bayou	4.9	7.6	10.7	14.3	17.7	Panama City Beach
10	Botheration Bayou	4.8	7.5	10.7	14.2	17.6	Panama City Beach
11	West Bay Bridge	5.4	8.2	11.7	14.8	18.3	West Bay
12	Crooked Creek	5.3	8.2	11.6	15.0	18.5	West Bay
13	Burnt Mill Creek	5.6	8.6	11.8	15.0	18.4	West Bay
14	Deer Point Lake, Site #3	3.5	3.6	3.8	13.2	18.3	Bay Head
15	Deer Point Lake, Site #2	3.5	3.9	4.5	15.3	17.4	Bay Head
16	Deer Point Lake, Site #1	3.6	4.1	4.8	14.1	17.5	Bay Head
17	Deer Point Dam	5.5	7.9	11.3	14.1	17.5	Bay Head
18	Fannin Bayou near SouthPort	5.3	8.0	11.1	14.3	17.7	Southport
19	Alligator Bayou near Steamplant	5.0	7.7	10.7	14.1	17.7	Southport
20	Bailey Bridge	5.1	7.8	11.0	14.2	17.6	Southport
21	Goose Bayou	4.7	7.3	10.3	13.7	17.3	Panama City Beach
22	St. Andrews Marina	5.0	7.8	11.1	12.4	15.4	Panama City Beach
23	St. Andrews Bay near EOC	5.0	7.9	10.2	12.2	15.9	Panama City Beach
24	City Hall; Massalina	4.8	7.9	9.9	14.4	15.6	Panama City Beach
25	Watson Bayou Bridge	4.6	7.4	9.5	13.7	17.5	Panama City Beach
26	Watson Bayou Inlet	4.3	6.7	8.7	12.4	15.7	Panama City Beach
27	Martin Lake	3.5	3.5	3.5	12.5	17.1	Springfield
28	Pearl Bayou	4.0	6.0	7.8	9.9	12.8	Long Point
29	Parker	4.1	6.1	7.8	9.8	12.7	Long Point
30	Shoal Point (near San Blas)	4.0	6.0	7.8	9.8	12.7	Long Point
31	Callaway Bayou	4.2	6.2	8.1	9.8	12.7	Long Point
32	Laird Bayou	4.3	6.3	8.2	9.9	12.7	Long Point
33	Beacon Beach	5.9	8.4	11.2	14.9	17.4	Beacon Beach
34	St. Andrew Cut	5.4	8.6	11.8	14.8	18.0	Crooked Island
35	St. Andrew Sound	5.6	8.9	12.1	15.1	18.3	Crooked Island
36	Crooked Island	5.4	8.6	11.9	15.0	18.0	Beacon Hill
37	Wild Goose Lagoon	4.7	9.2	12.2	15.4	18.4	Beacon Hill
38	Mexico Beach, Site #1	5.8	9.3	13.0	17.0	19.2	Beacon Hill
39	Mexico Beach, Site #2	5.7	9.3	13.1	17.0	19.8	Beacon Hill
40	Mexico Beach, Site #3	5.7	9.1	13.2	17.0	19.8	Beacon Hill



Northwest Florida
Hurricane Evacuation Study

N

LEGEND

36 Time History Point

BAY COUNTY,
FLORIDA
TIME HISTORY
POINTS

Figure 2-7

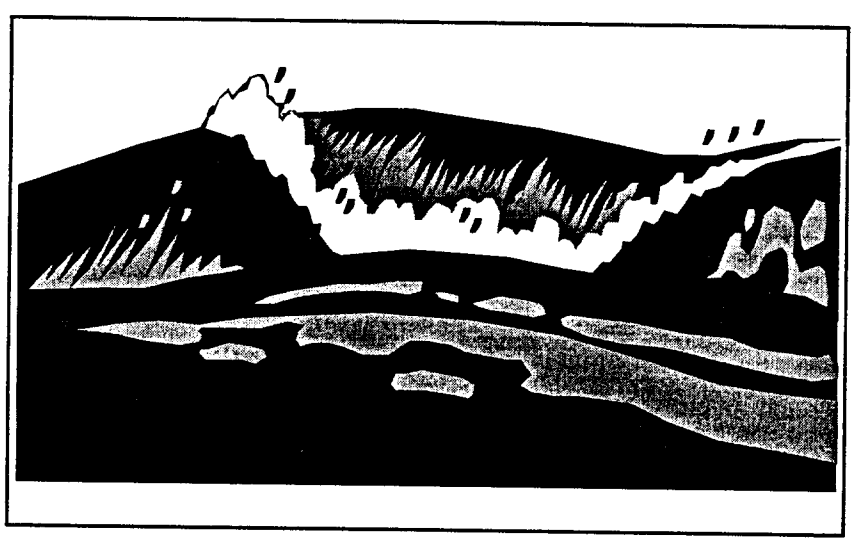
Figure 2-7

TROPICAL CYCLONE ADVISORY

Tropical cyclone advisories, produced by the National Hurricane Center every 6 hours, give the measured distance in nautical miles of the 34-knot (approximately 40 miles per hour), 1-minute sustained wind speed (tropical storm) from the eye of an approaching hurricane. These distances are given for the four quadrants of the storm (i.e., northwest, northeast, southeast, southwest). Forecasts of these distances for 12, 24, 36, 48, and 72 hours into the future are also given. The largest radius listed should be used for the pre-landfall hazards distance in evacuation deciion-making. Further discussion of the application of the radius of tropical storm winds to hurricane evacuation decision-making is contained in Chapter 7, Decision Arcs.

WAVE EFFECT

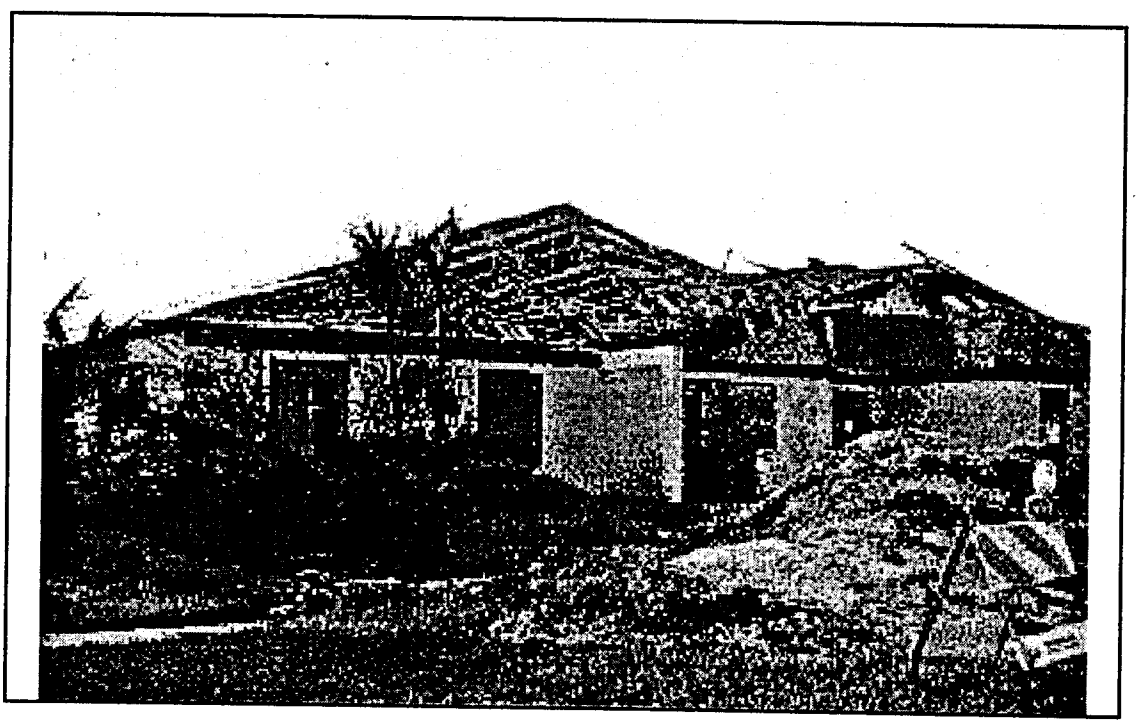
The SLOSH model does not provide data concerning the additional heights of waves generated on top of the still-water storm surge. Generally, waves do not add significantly to the area flooded and have little effect on the number of people that will be required to evacuate. Since near-shore wave phenomena under hurricane conditions are not well understood, it is assumed that for the open coast, maximum theoretical wave heights based upon relationships of fetch length to water depth occur near the time of landfall. Immediately along the coastline or the shorelines of very large sounds and estuaries, wave crests can increase the expected still-water depth above the terrain by one-third, thus greatly increasing the hazard. Due to the presence of barriers such as structures, dunes, or vegetation, the waves break and dissipate a tremendous amount of energy within a few hundred yards of the coastline. Buildings within that zone that are not specifically designed to withstand the forces of wave action are often heavily damaged or destroyed.



For evacuation planning purposes, it is perhaps more important to consider potential wave effects for less than sustained tropical storm winds. If wave heights above theoretical still-water levels exceed the elevations of roads, bridges, or other critical areas near the coastline, evacuation could be curtailed sooner than expected, increasing the pre-landfall hazards distance. Evacuation planners should be aware that low-lying sections of highway could be subject to some wave action and over-wash prior to the arrival of sustained tropical storm winds, especially with the coincidental occurrence of astronomical high tide.

HURRICANE WINDS

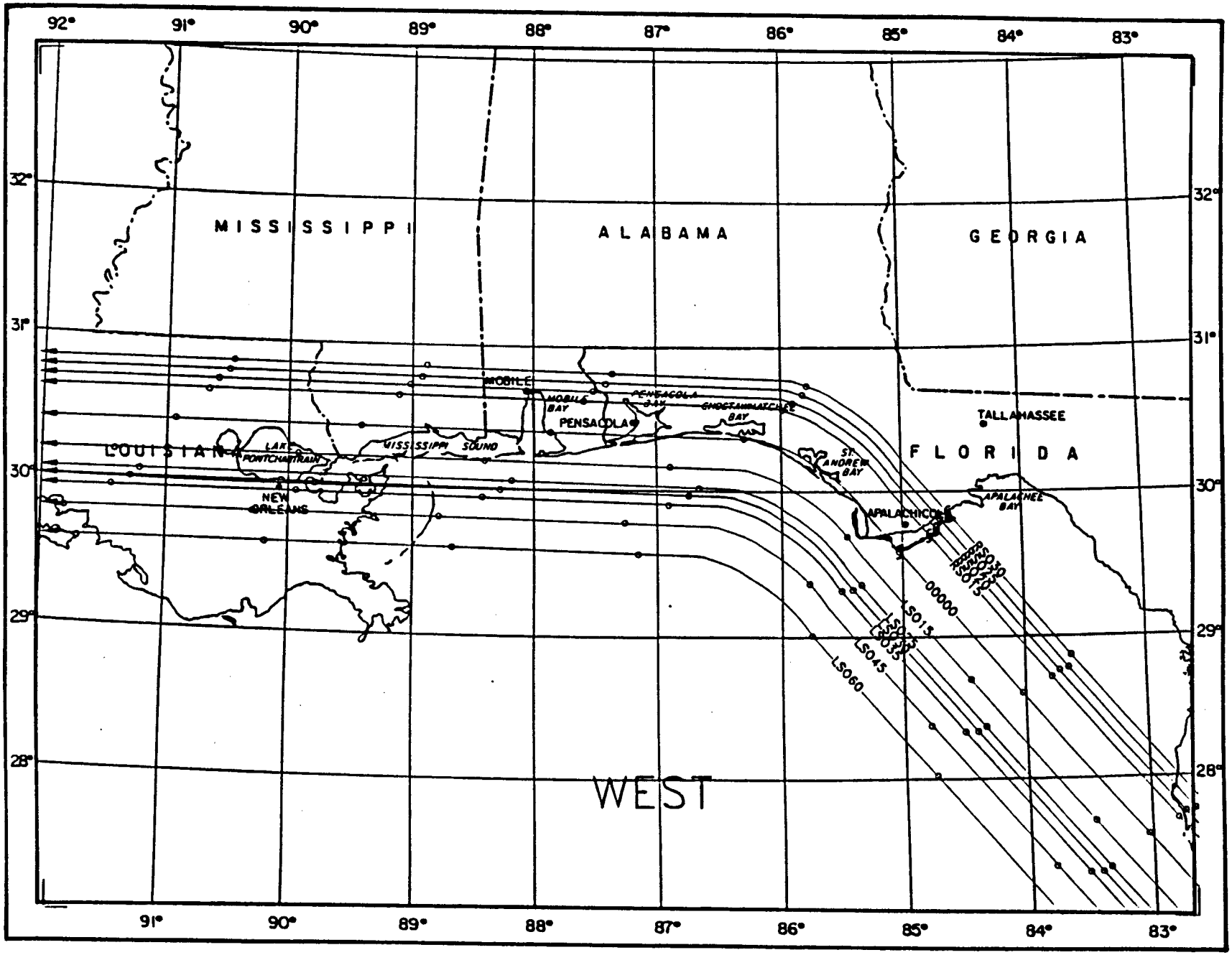
After hurricane Hugo in North Carolina and Andrew in south Florida it became apparent that storm surge was not the only life threatening feature of hurricanes. Destructive hurricane force winds and tornados effected many inland counties as far as 100 miles from the coast.



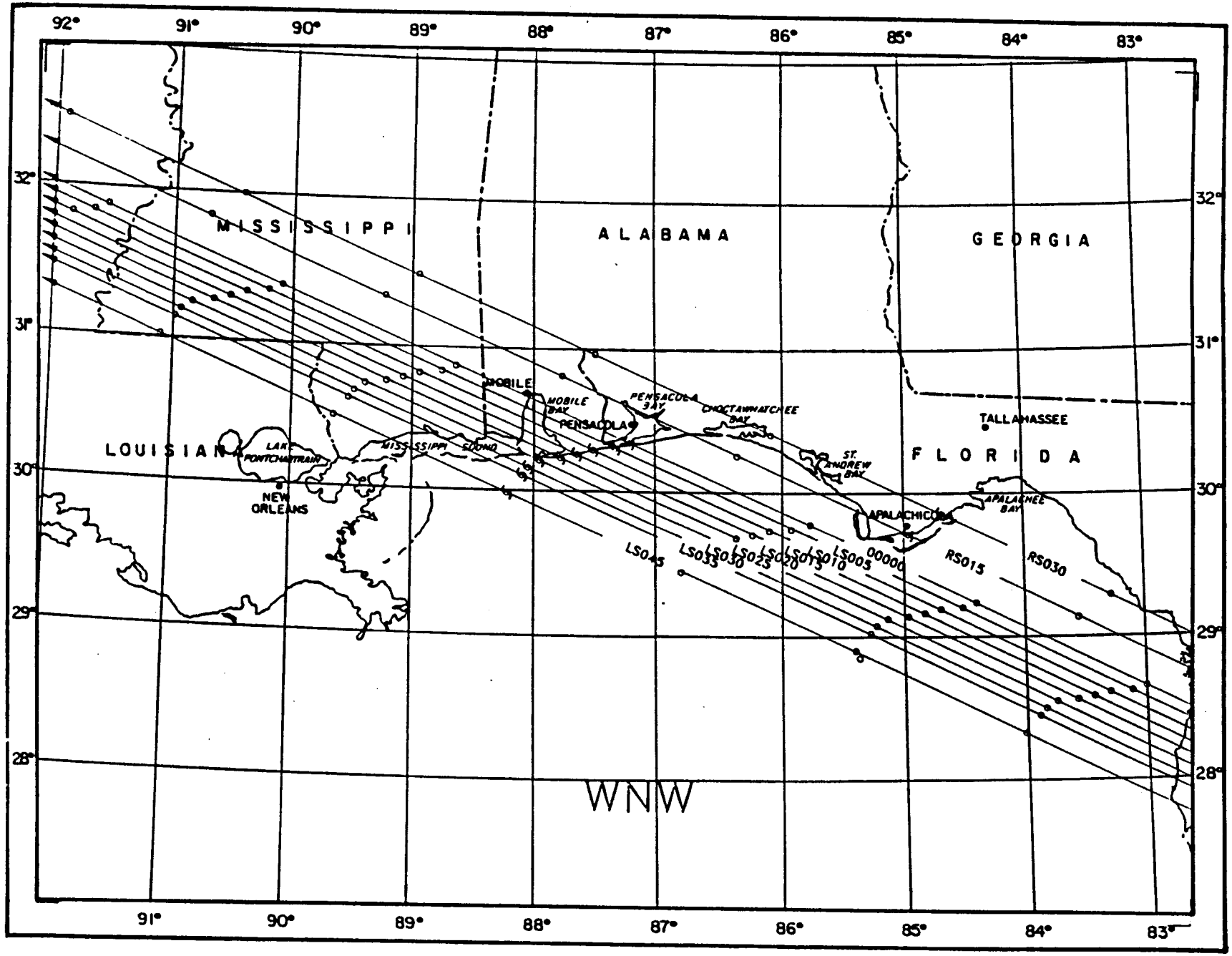
Studies by the National Hurricane Center (NHC) have resulted in modifying the Tropical Cyclone Advisory to include additional information to help inland counties prepare for threatening high wind conditions. An inland wind analysis option is included in the new HurrWin95 software program to assist inland communities in estimating when damaging winds might hit their county. The inland wind analysis is designed to be used ONLY a FEW HOURS before the hurricane makes landfall. This is when the NHC's track and wind-field forecast errors are relatively low.

FRESHWATER FLOODING

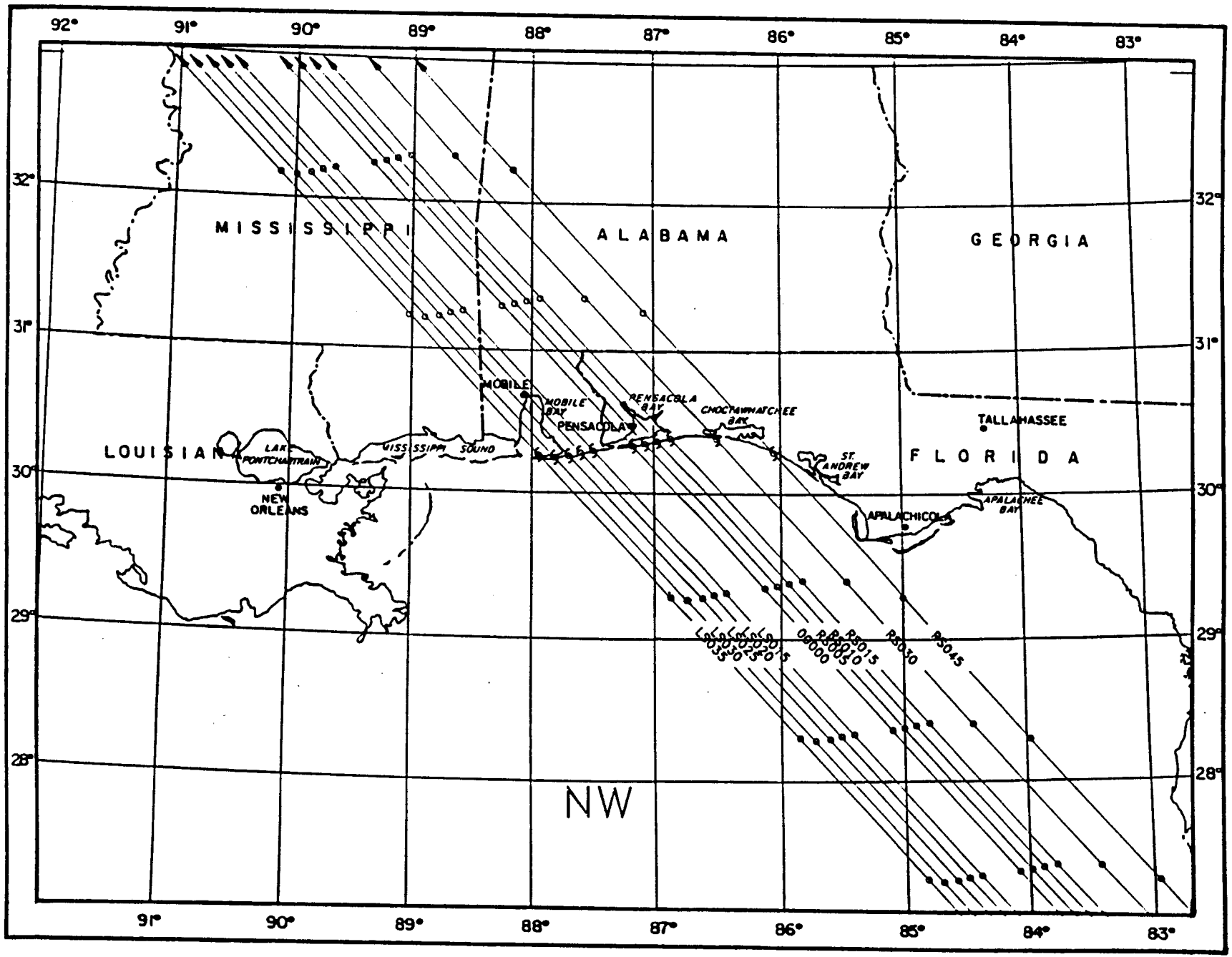
Amounts and arrival times of rainfall associated with hurricanes are highly unpredictable. For most hurricanes, rainfall begins near the time of arrival of sustained tropical storm winds and generally reaches maximum rainfall rates as the center passes by. Unrelated weather systems in advance of the hurricane can also contribute significant rainfall amounts within a basin. The 100-year floodplain boundaries for each county are shown on the National Flood Insurance Rate Maps (FIRM) which are published by the Federal Emergency Management Agency (FEMA). This information has also been provided to each county on a study product CD in digital format as an ArcExplorer project. The floodplain data shown on the CD is based on the Q3 digital FIRM map data prepared by FEMA and furnished by the State. Critical roadways that could be subject to flooding from heavy rainfall are discussed in Chapter 3 - Vulnerability Analysis.



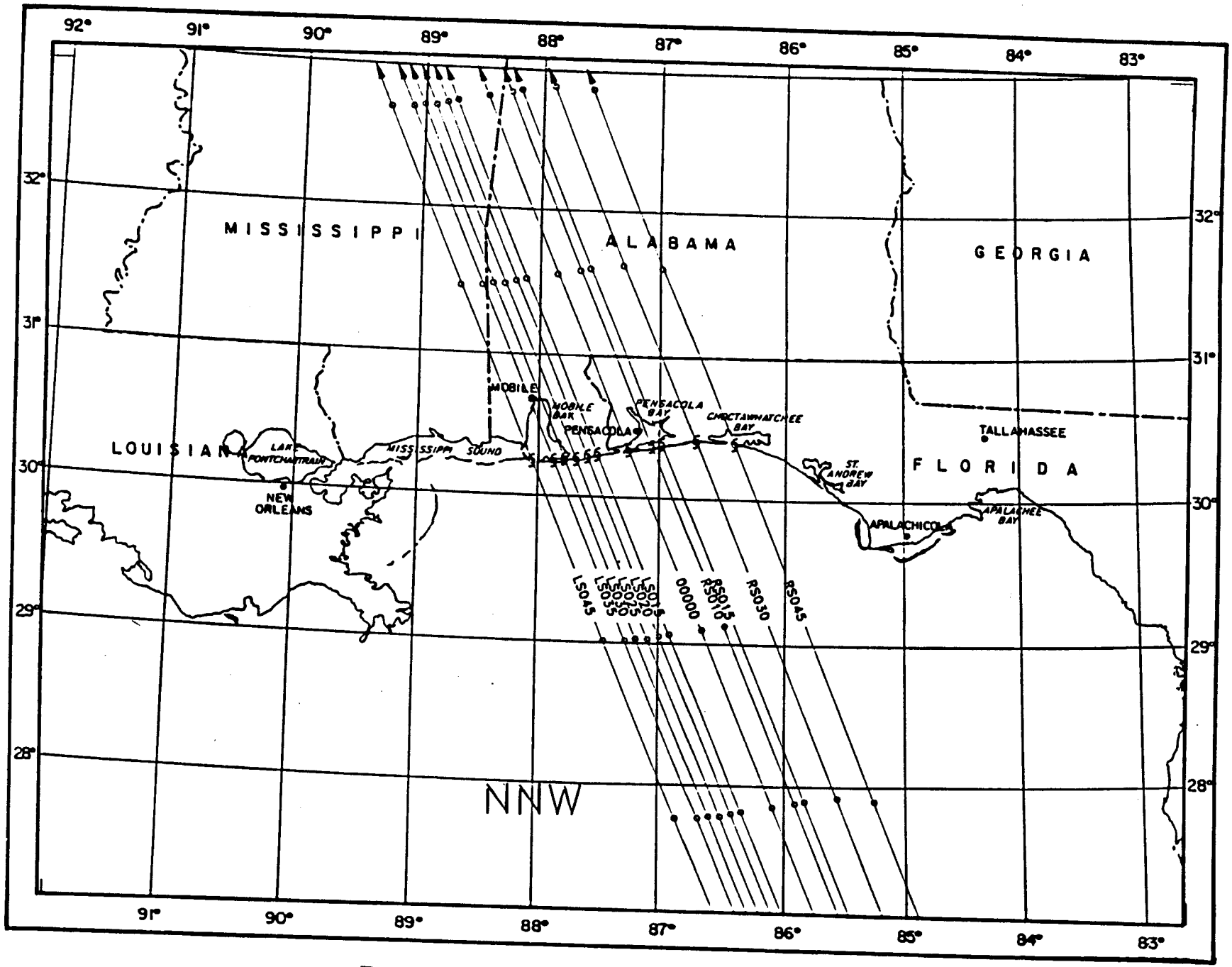
Pensacola simulated storms moving W



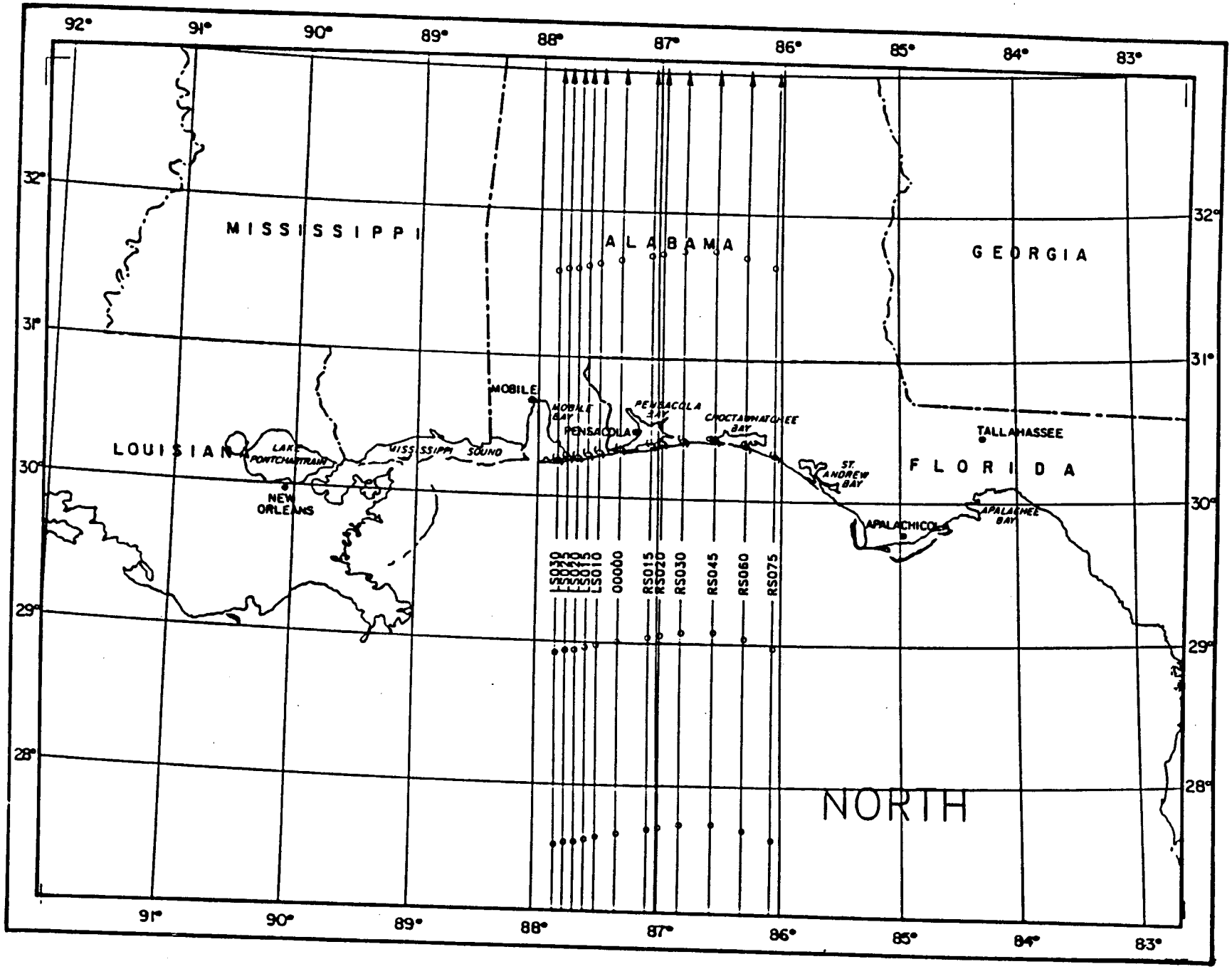
Pensacola simulated storms moving WNW



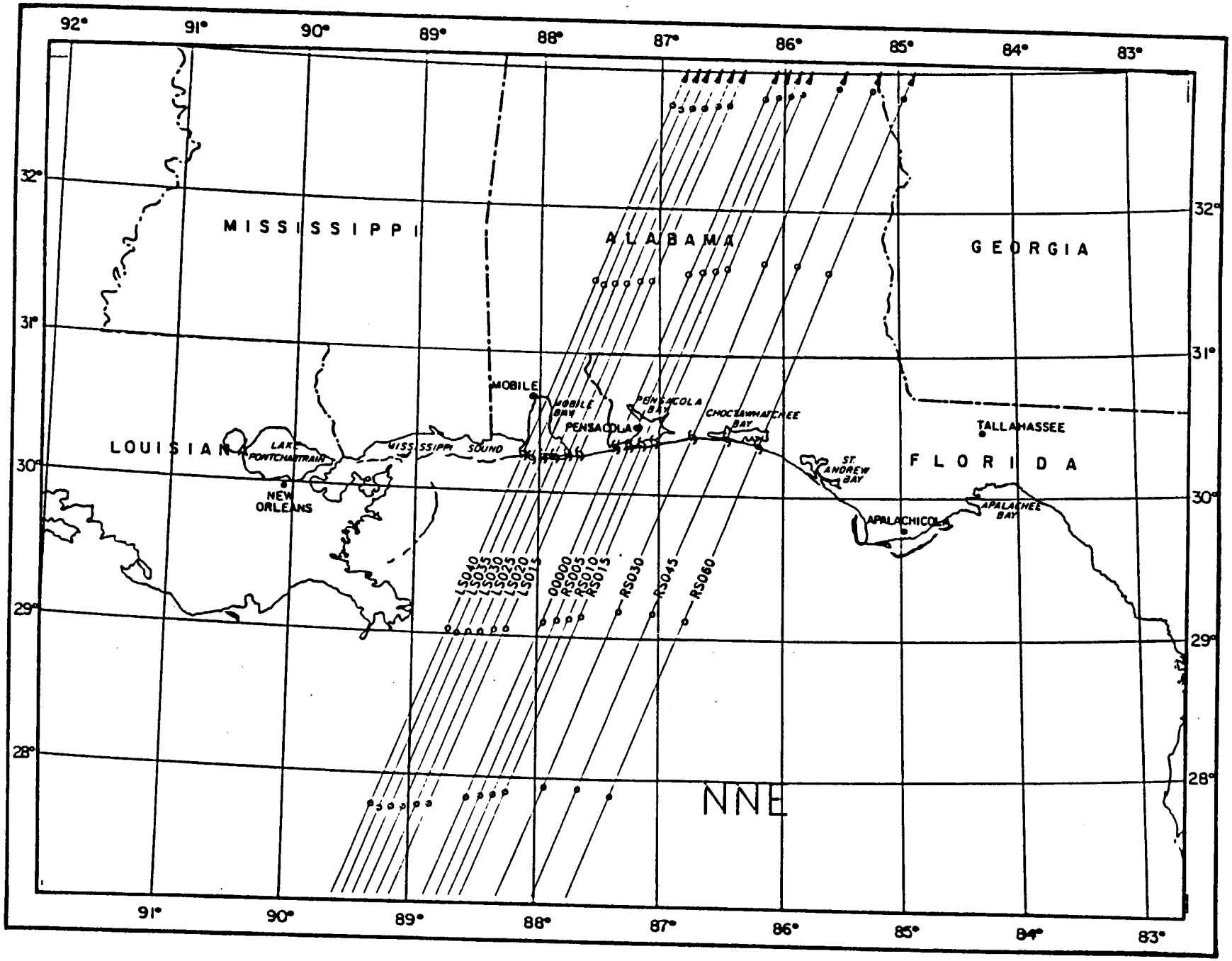
Pensacola simulated storms moving NW



Pensacola simulated storms moving NNW



Pensacola simulated storms moving N



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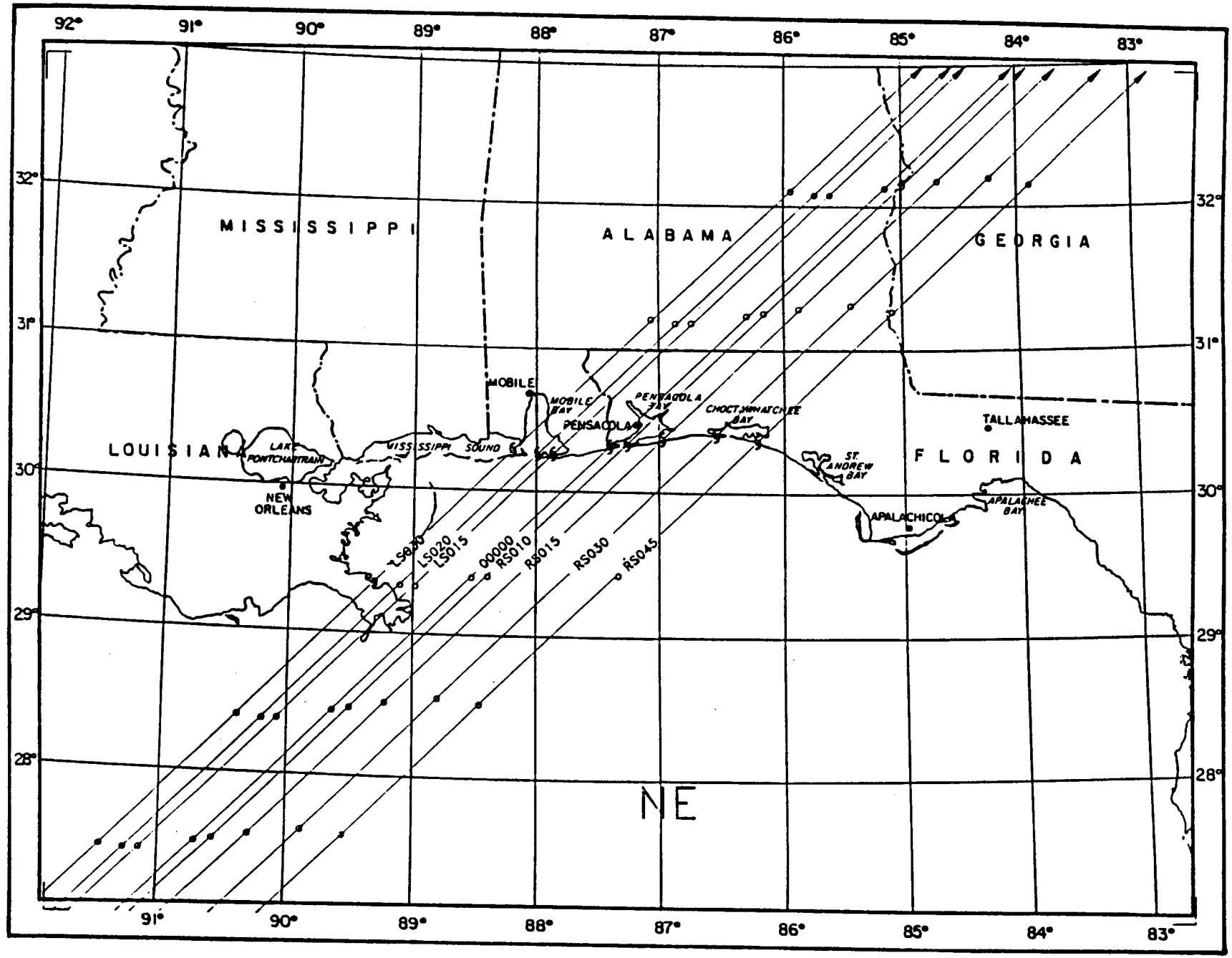

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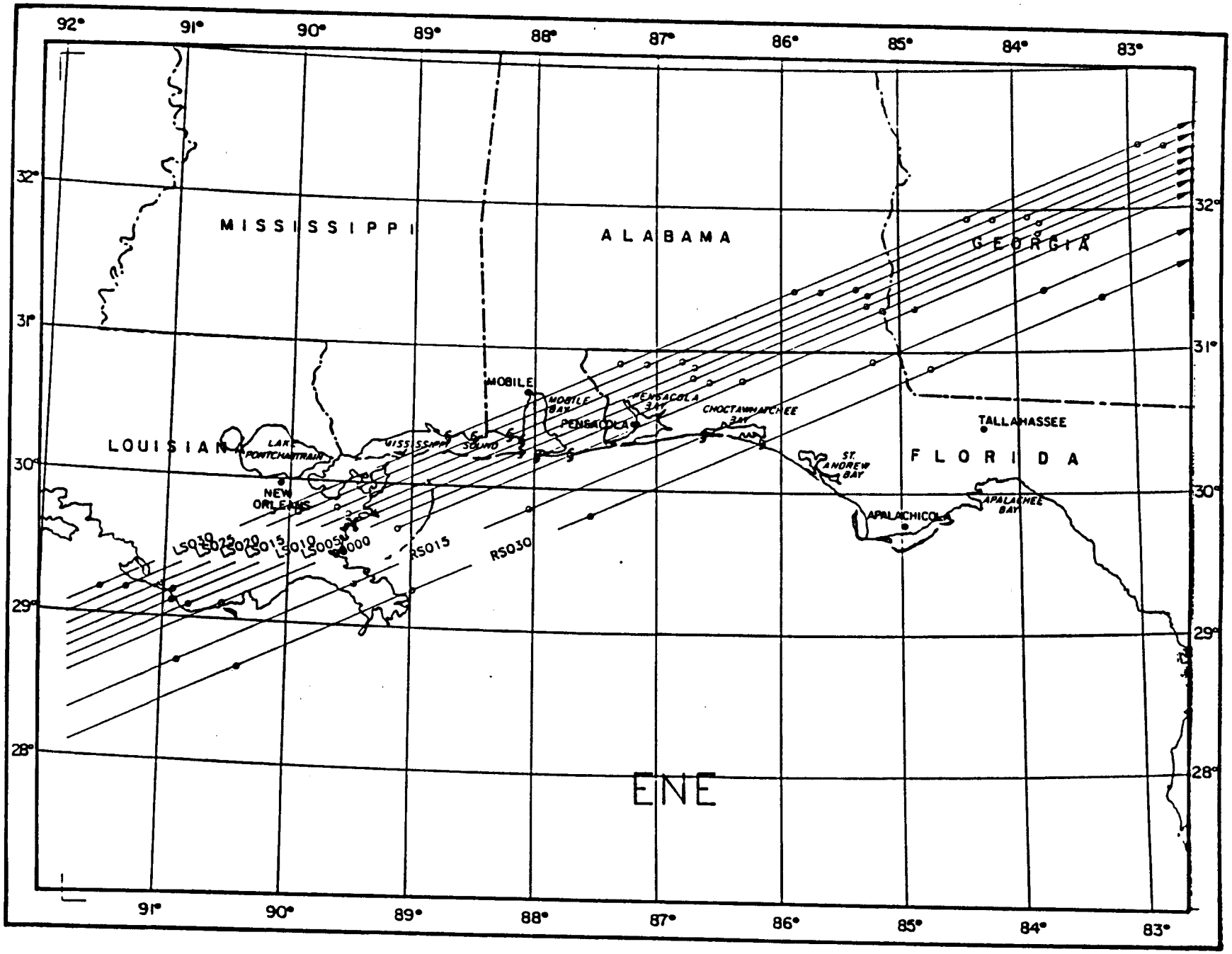

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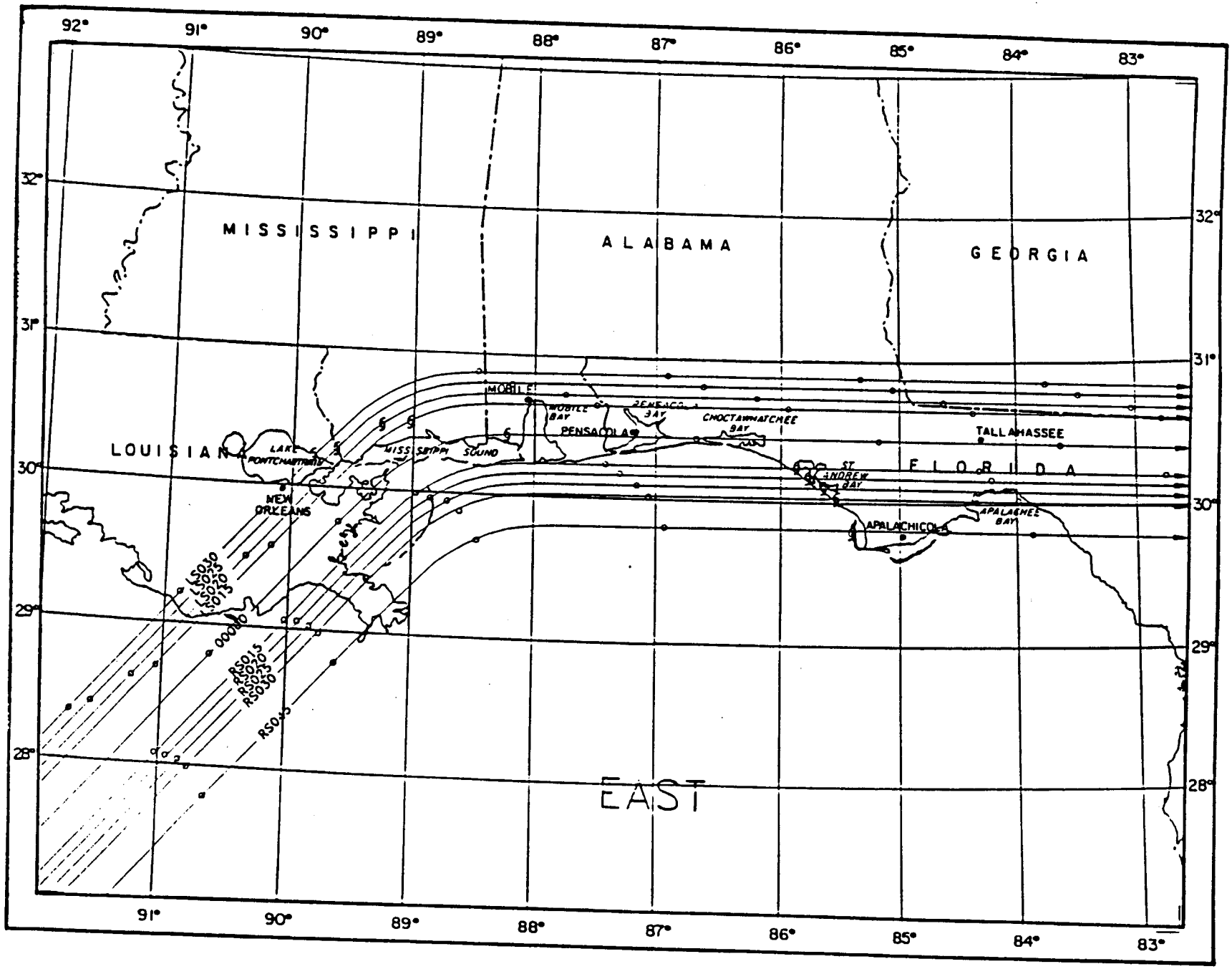

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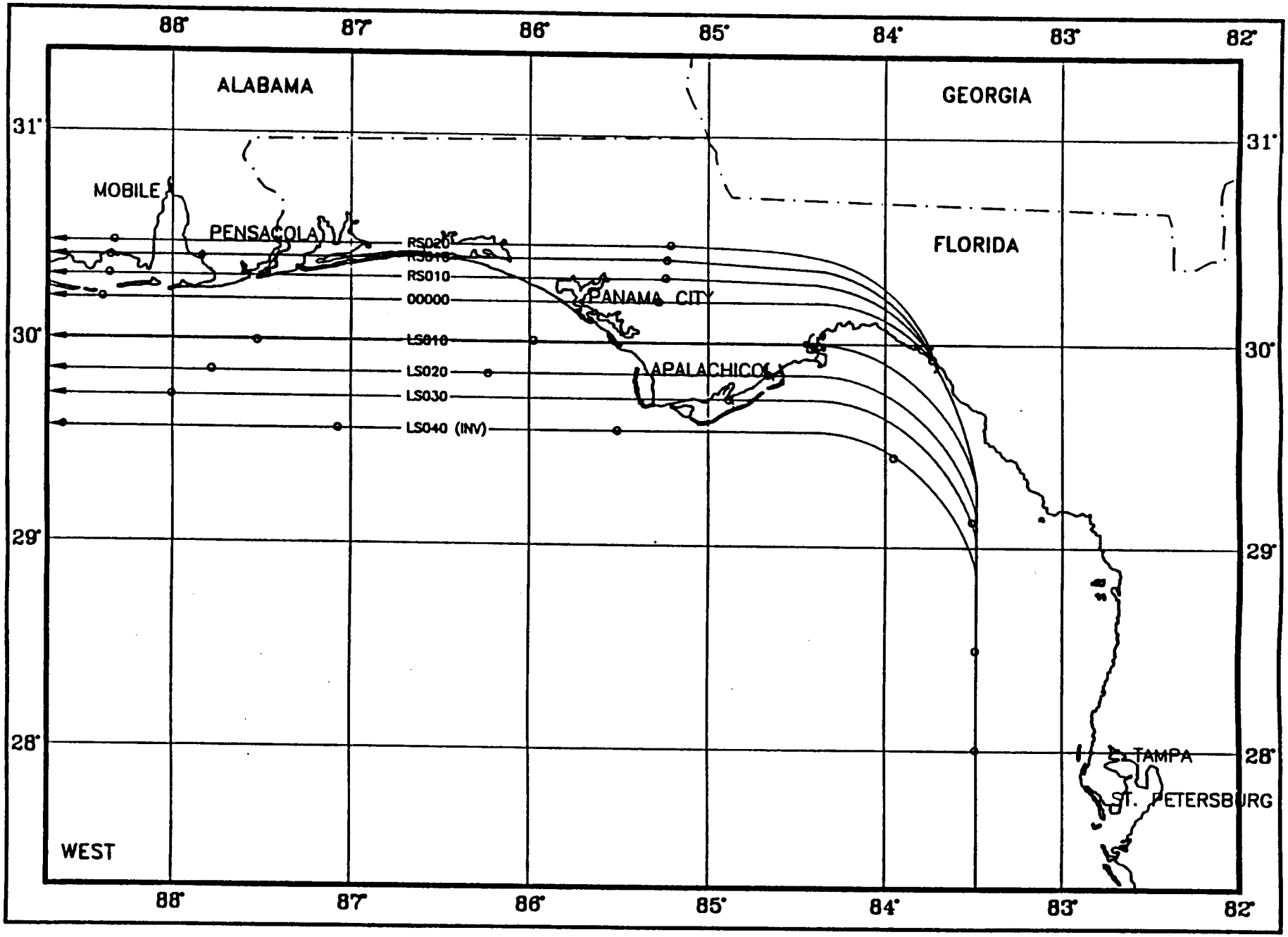
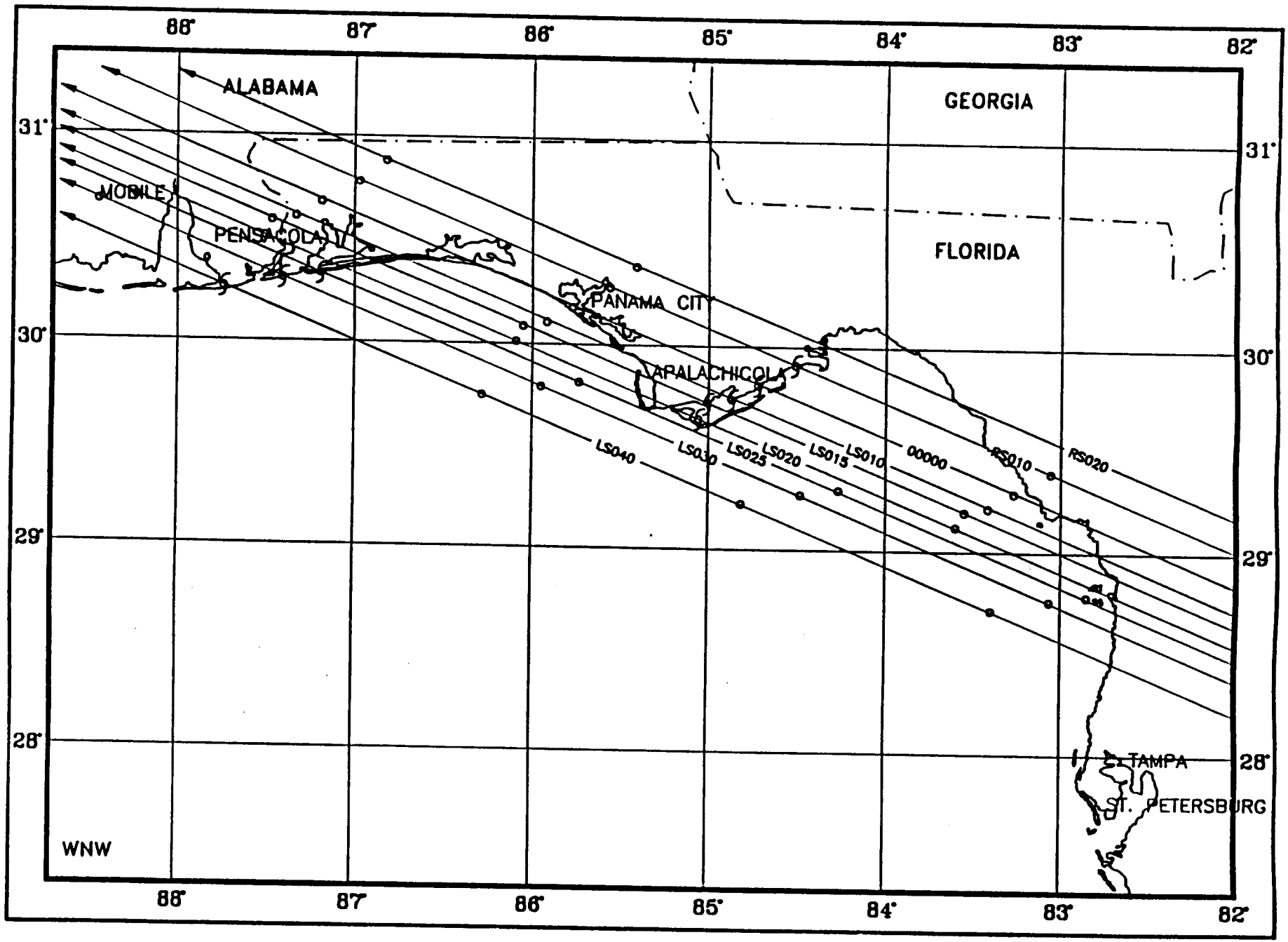
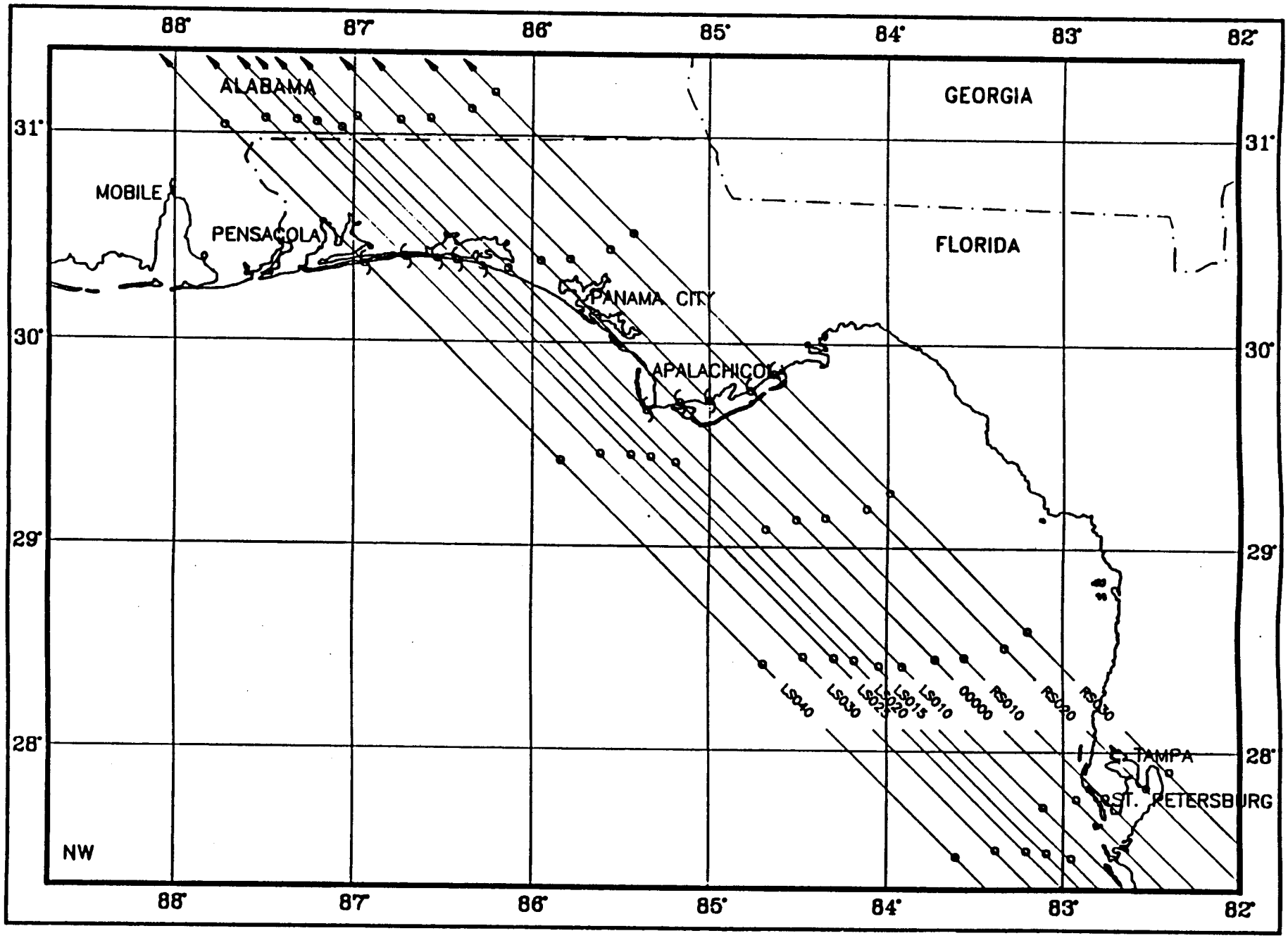


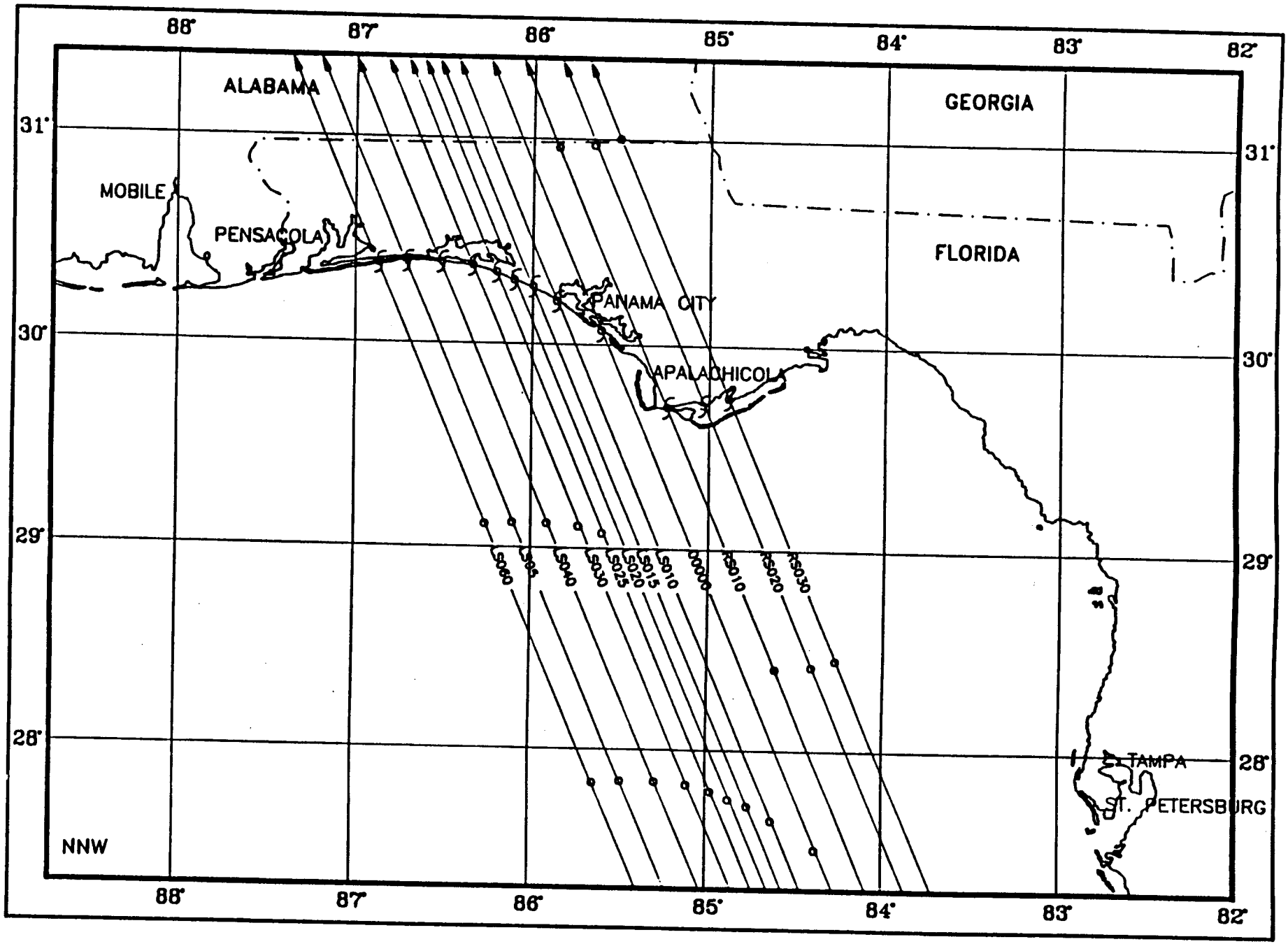
Panama City simulated storms moving W



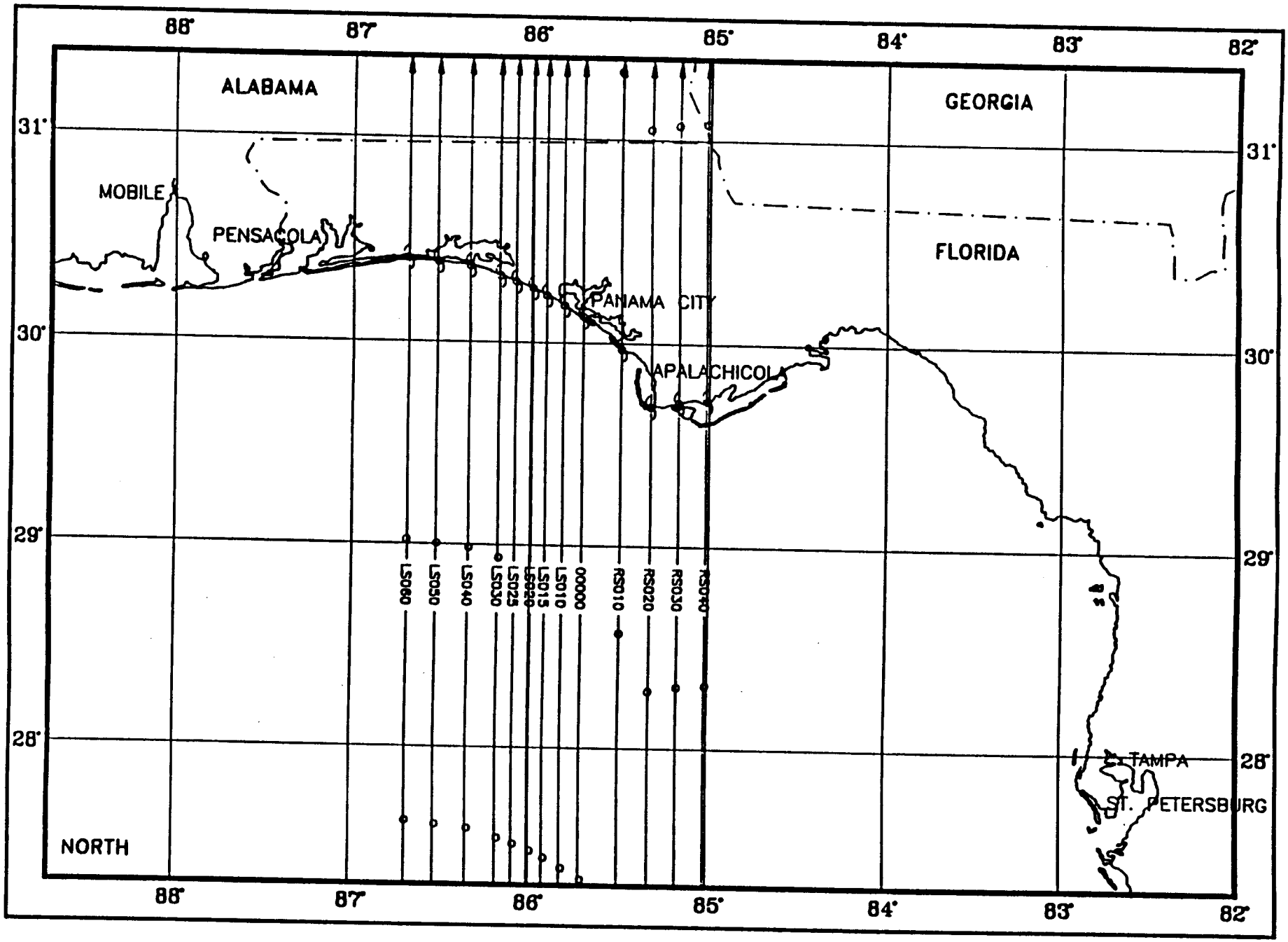
Panama City simulated storms moving WNW



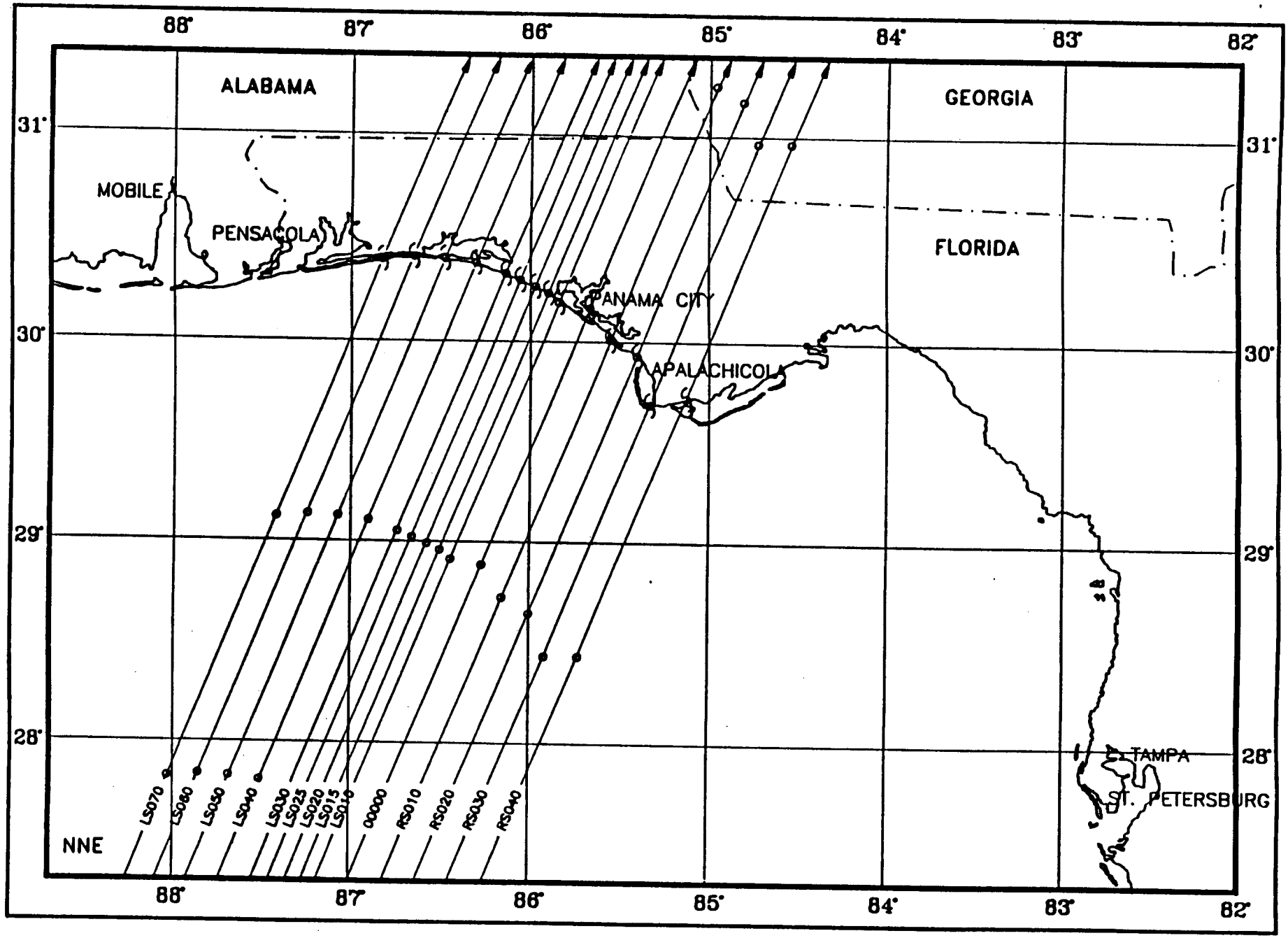
Panama City simulated storms moving NW



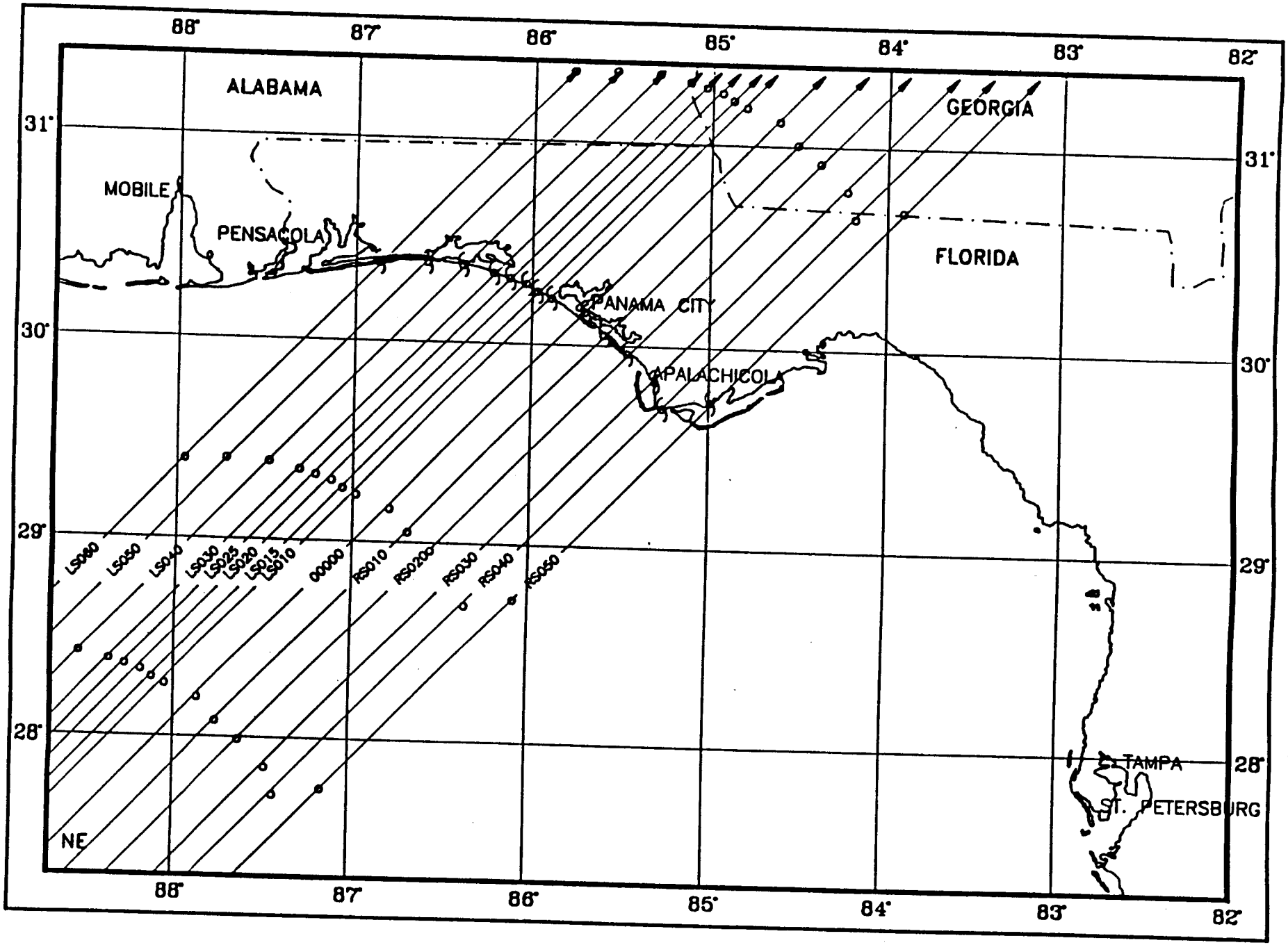
Panama City simulated storms moving NNW



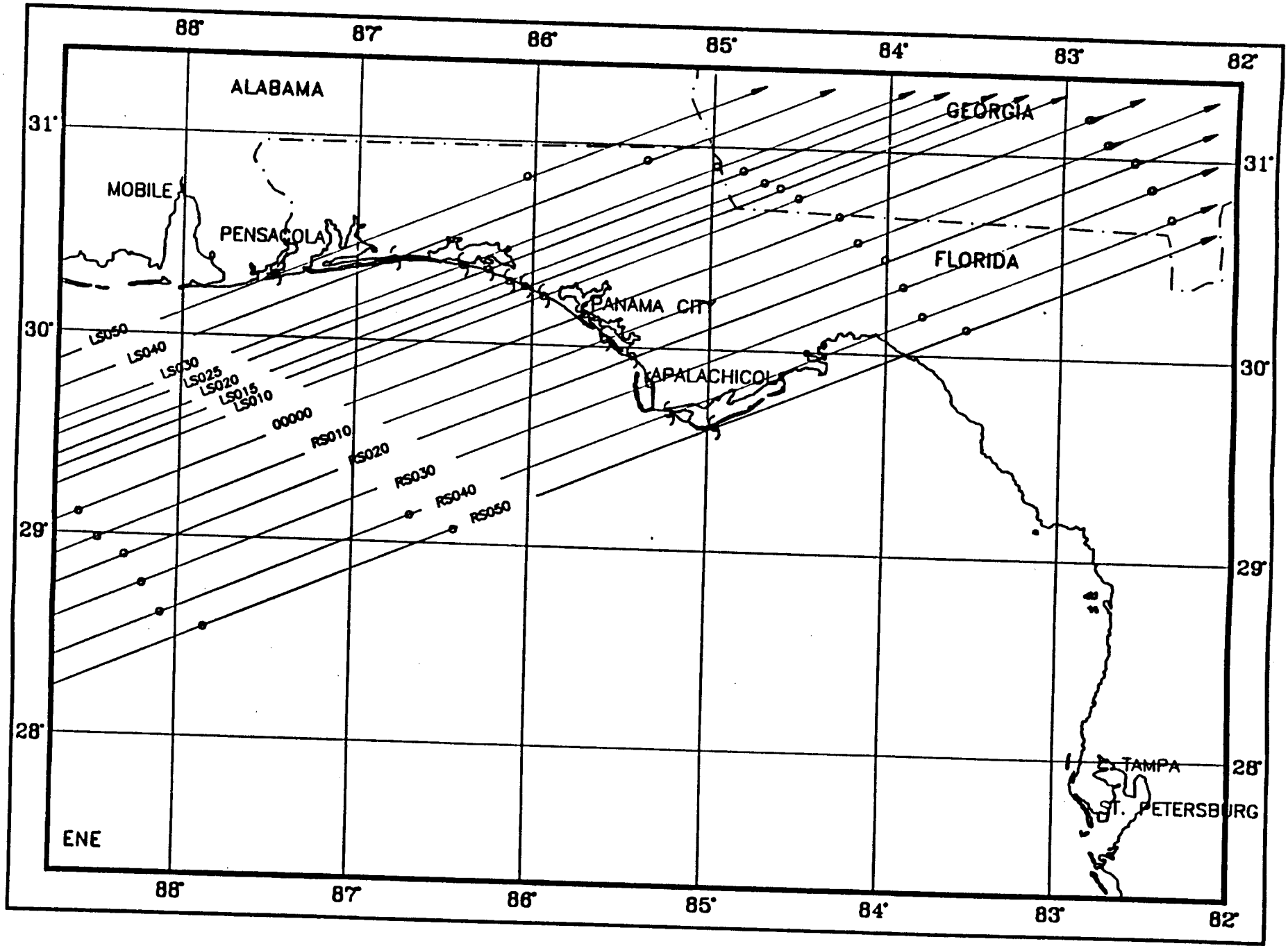
Panama City simulated storms moving N



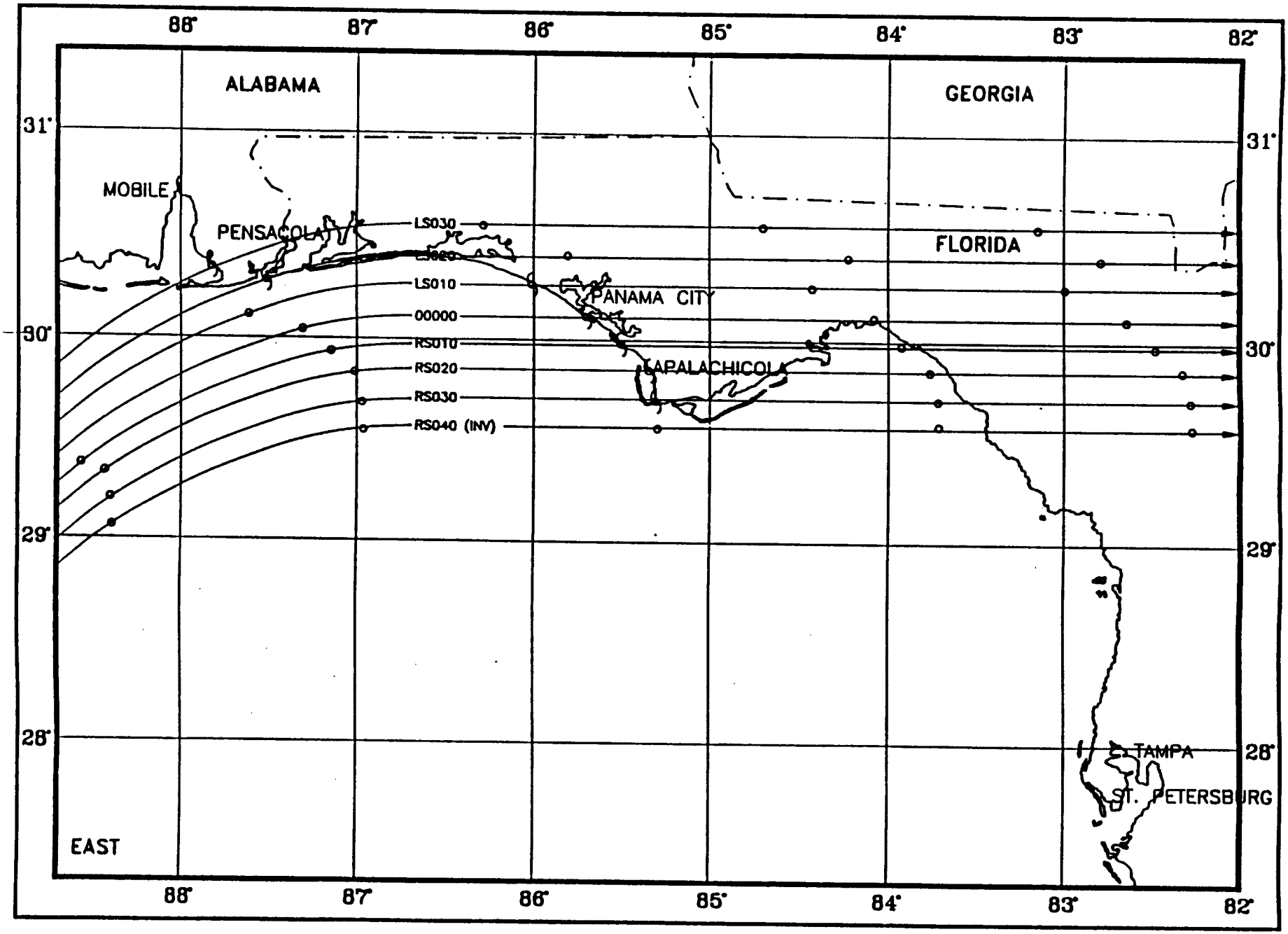
Panama City simulated storms moving NNE



Panama City simulated storms moving NE



Panama City simulated storms moving ENE



Panama City simulated storms moving E

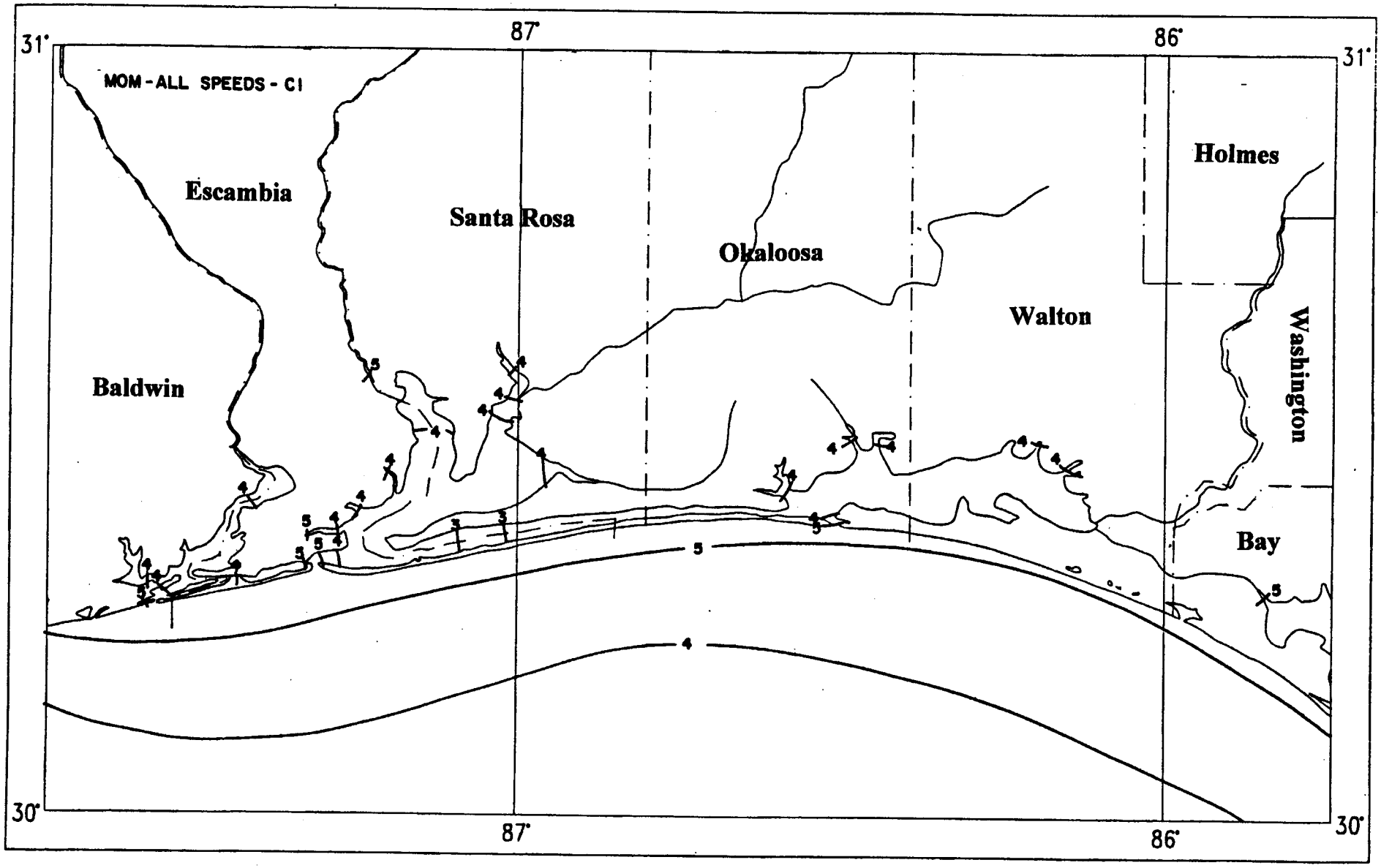

MOM - ALL SPEEDS - CI
31°
87°
86°
31°
30°
87°
86°
30°
Escambia
Santa Rosa
Okaloosa
Walton
Holmes
Washington
Bay
Baldwin
5
4

PLATE 2-19

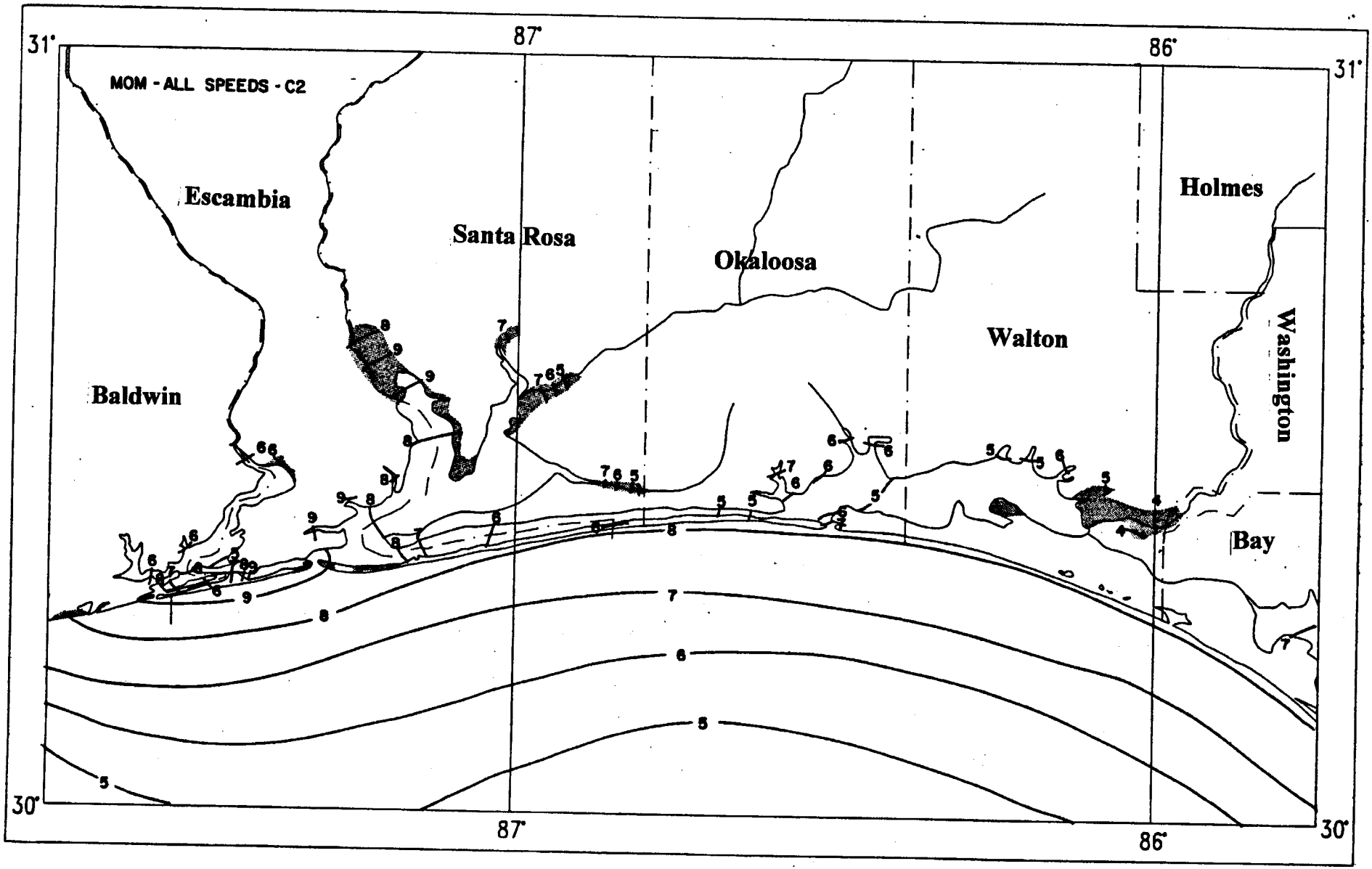
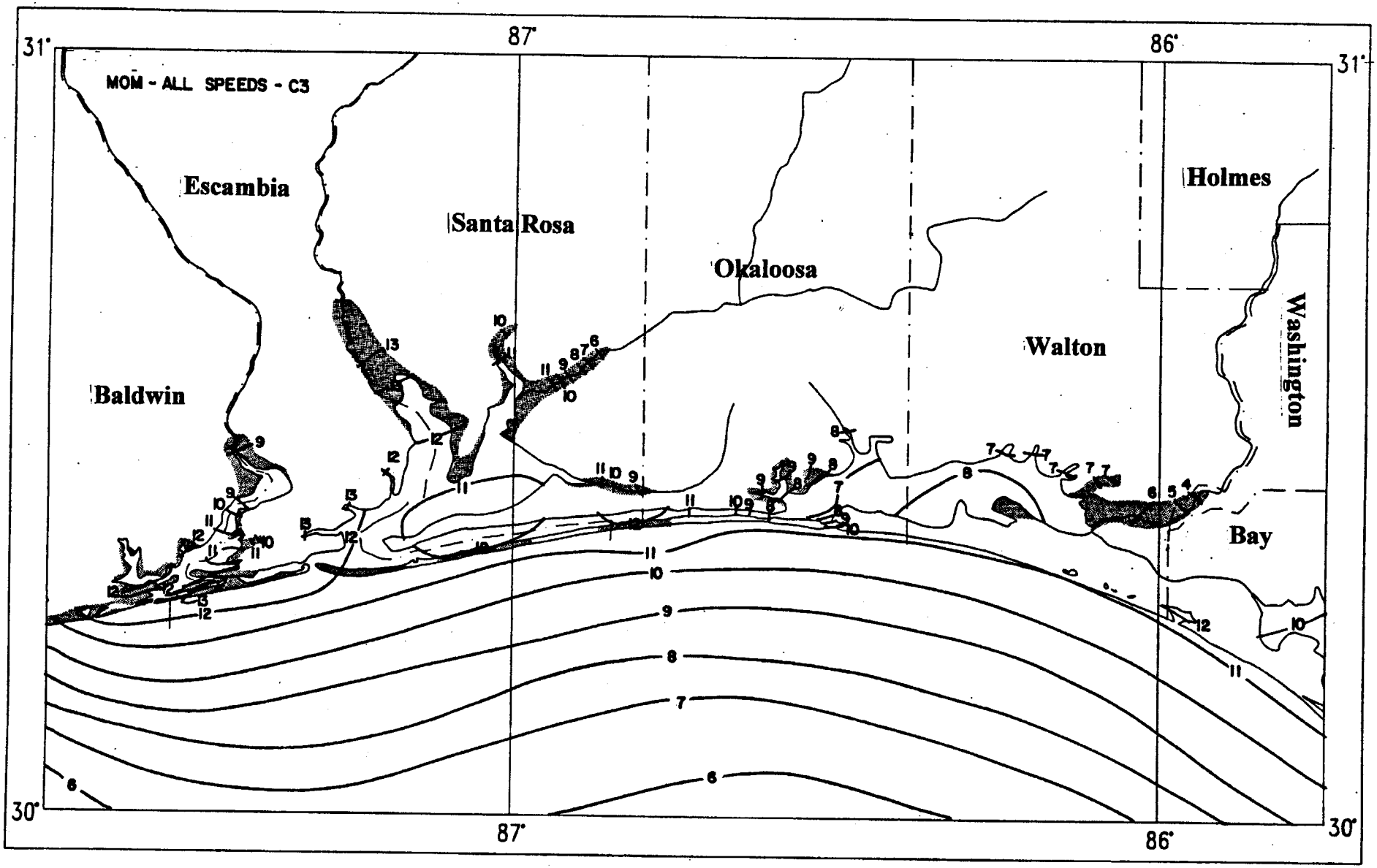

MOM - ALL SPEEDS - C2
31°
87°
86°
31°
30°
87°
86°
30°
Escambia
Santa Rosa
Okaloosa
Walton
Holmes
Washington
Baldwin
Bay

PLATE 2-20


MOM - ALL SPEEDS - C3
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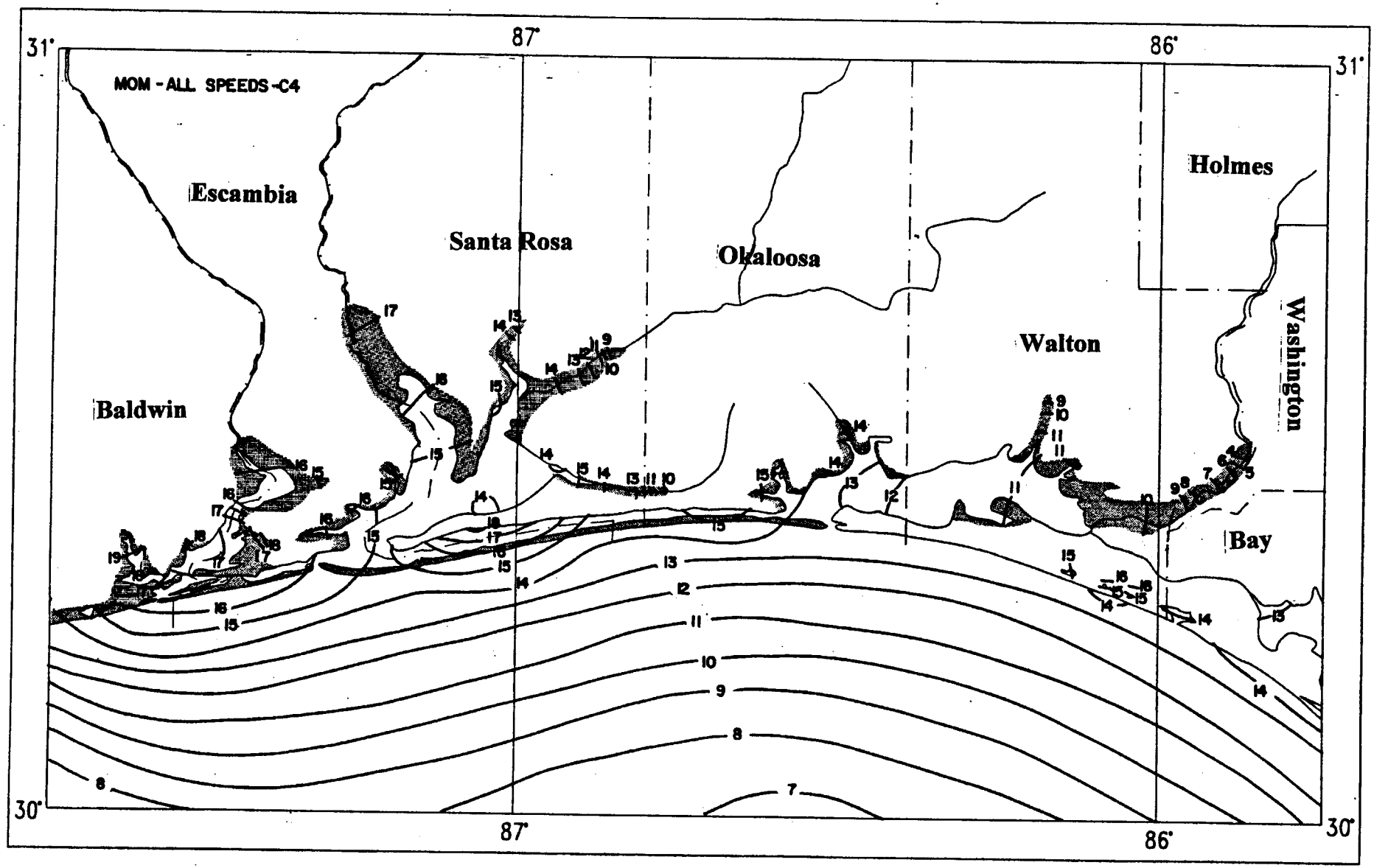
Okaloosa
Walton
Holmes
Washington
Baldwin
Bay
31°
87°
86°
30°

PLATE 2-21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Walton
Holmes
Washington
Baldwin
Bay
31°
87°
86°
30°

PLATE 2-22

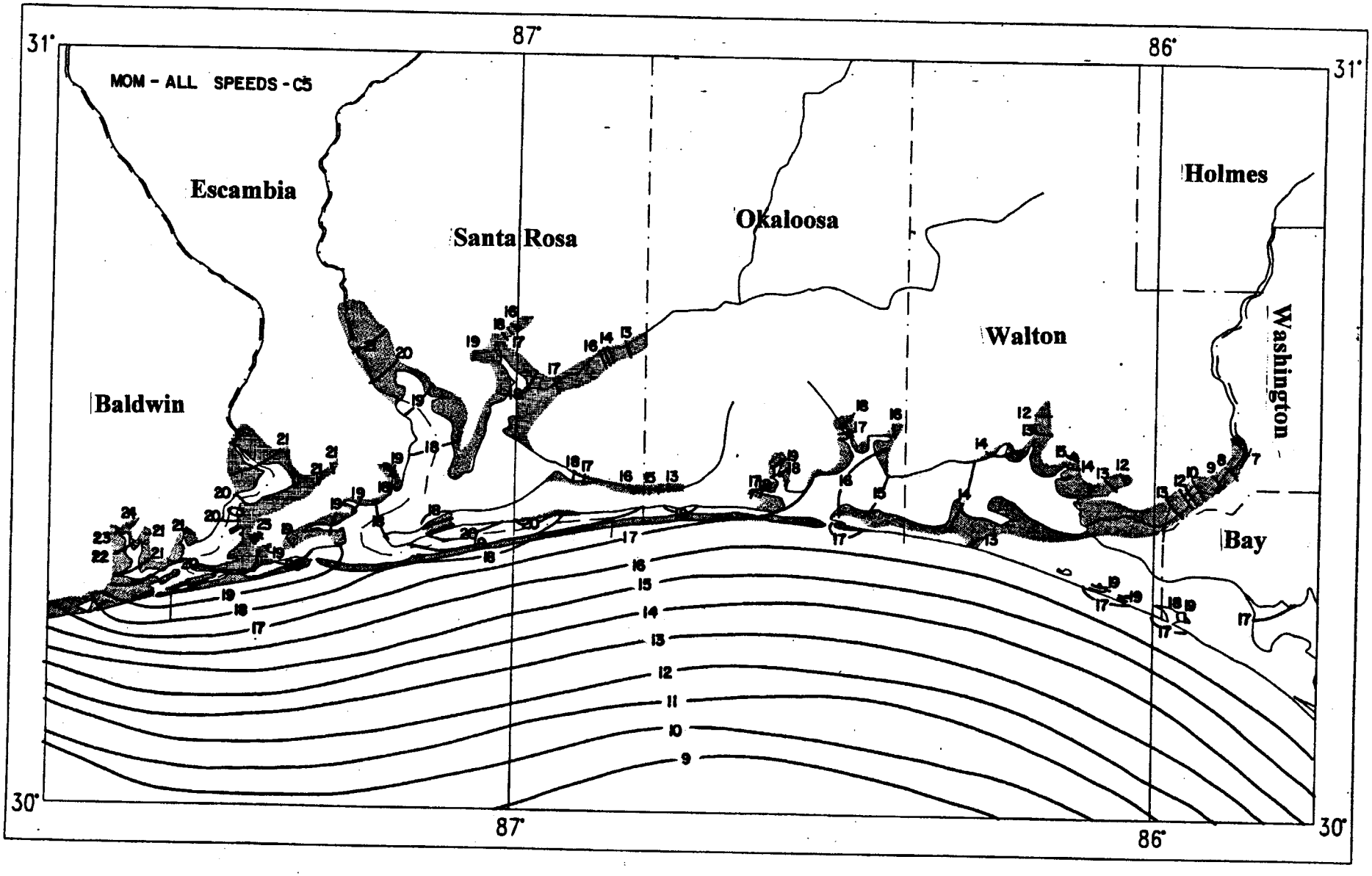

MOM - ALL SPEEDS - C5
Escambia
Santa Rosa
Okaloosa
Holmes
Walton
Washington
Baldwin
Bay
31°
87°
86°
30°

PLATE 2-23

The Panama City MOM for the Category 1 Hurricane

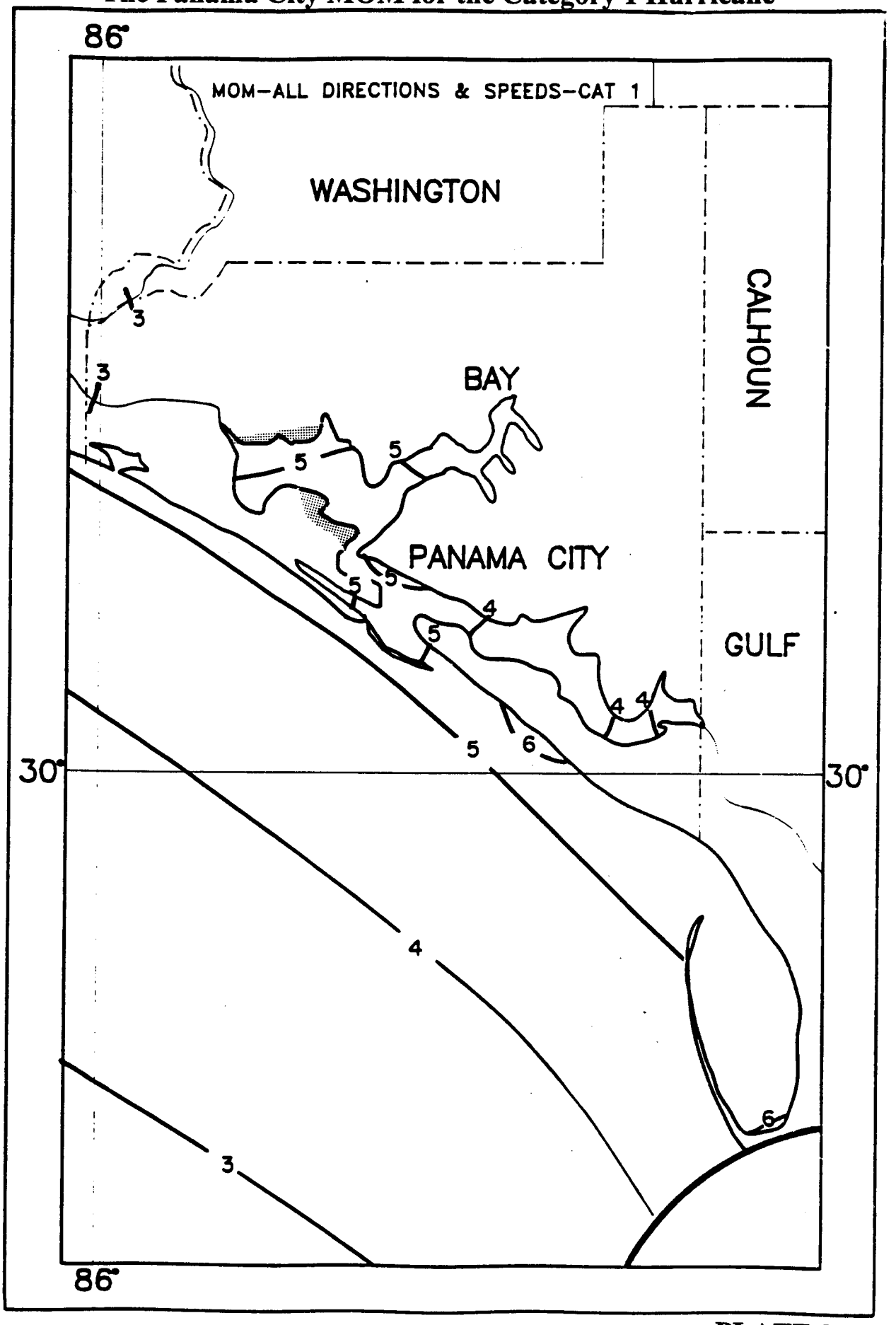


PLATE 2-24

The Panama City MOM for the Category 2 Hurricane

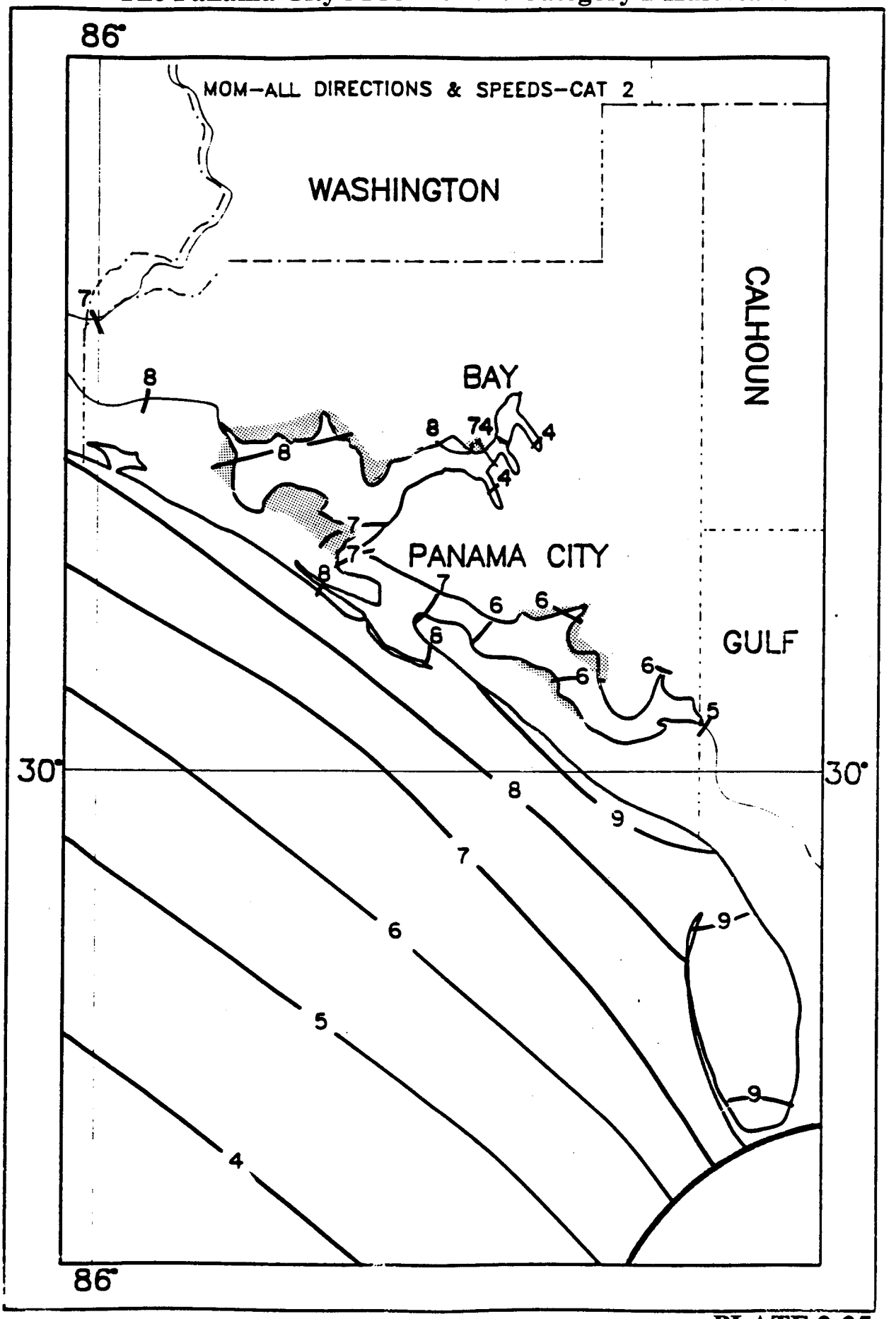


PLATE 2-25

The Panama City MOM for the Category 3 Hurricane

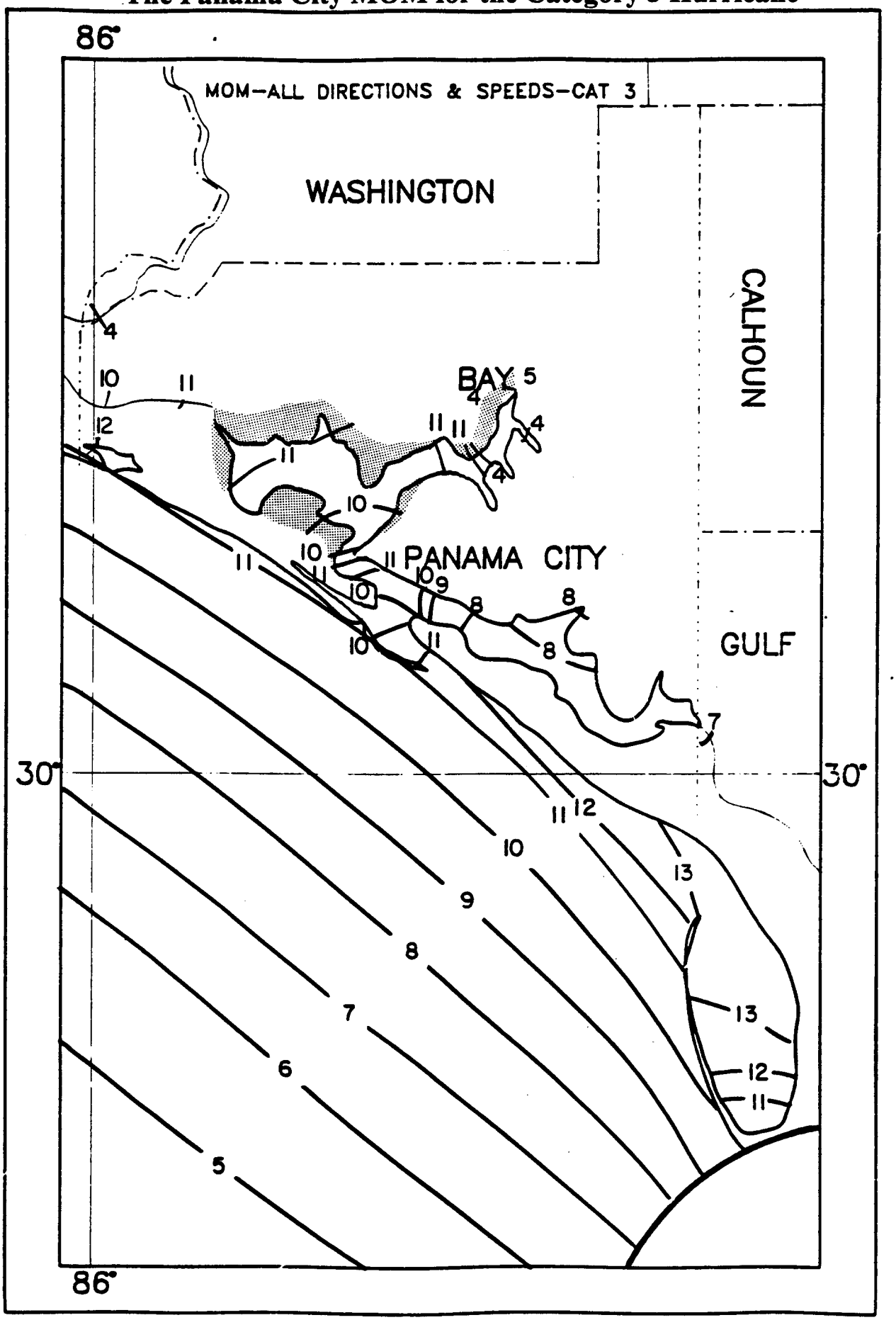


PLATE 2-26

The Panama City MOM for the Category 4 Hurricane

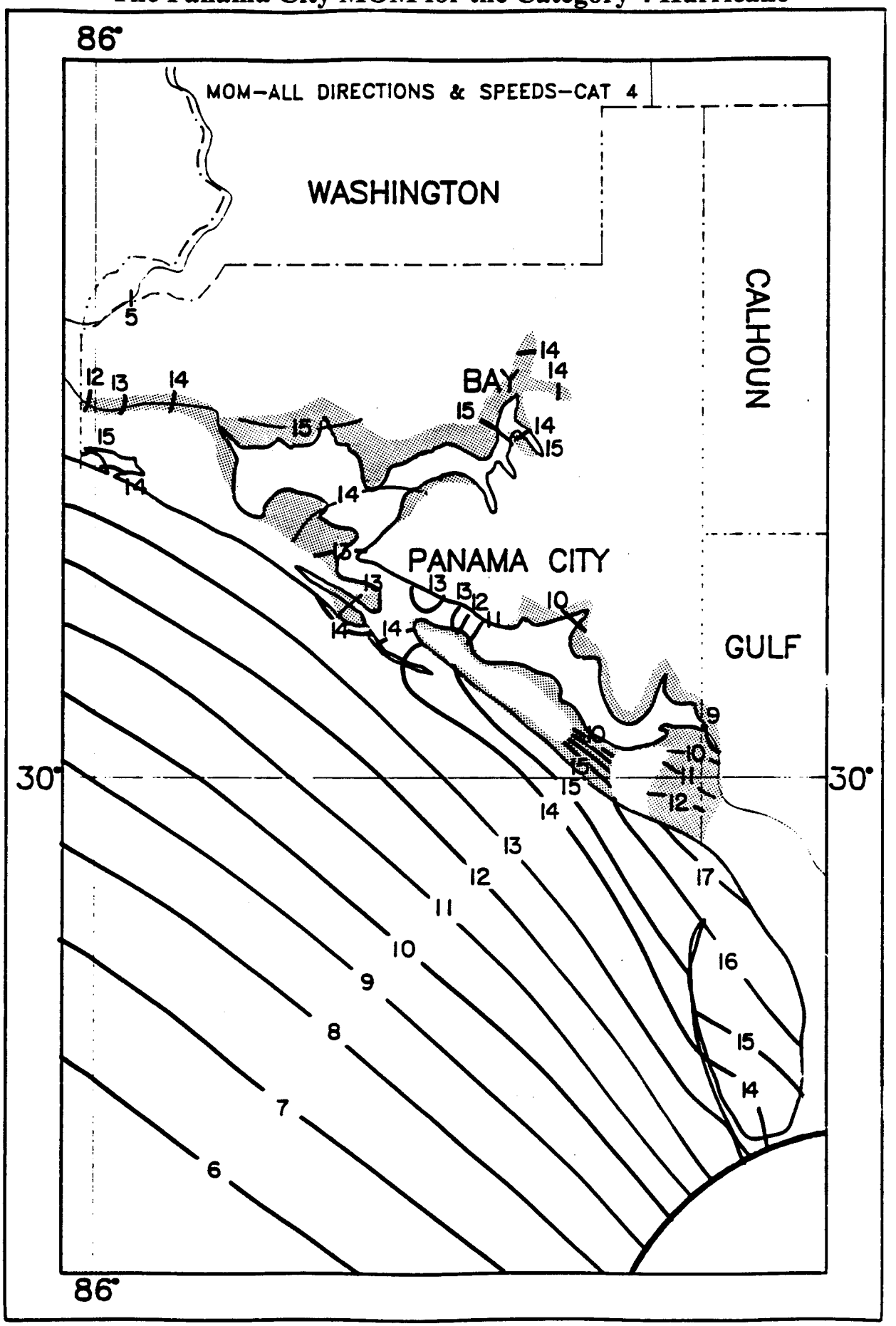


PLATE 2-27

The Panama City MOM for the Category 5 Hurricane

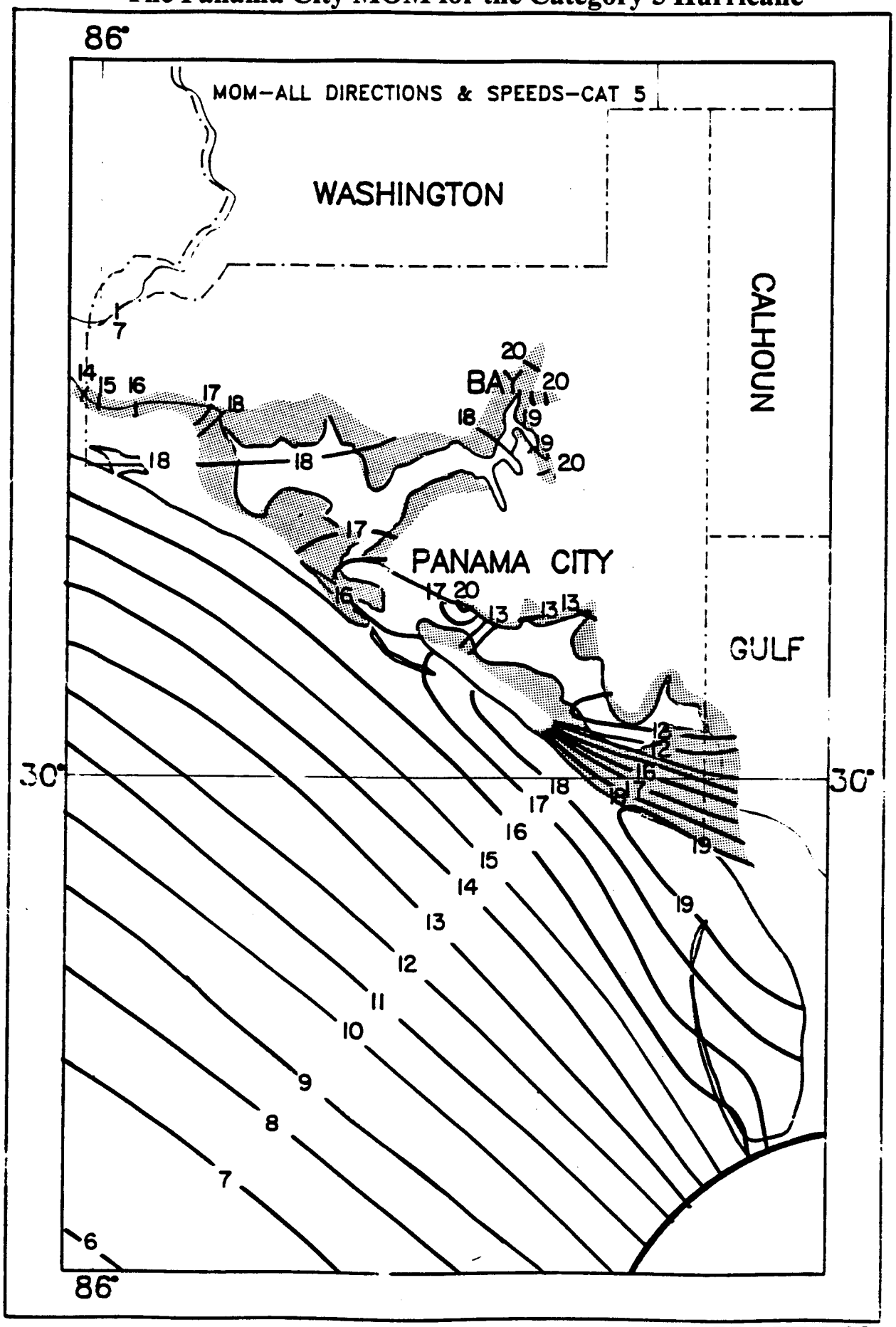
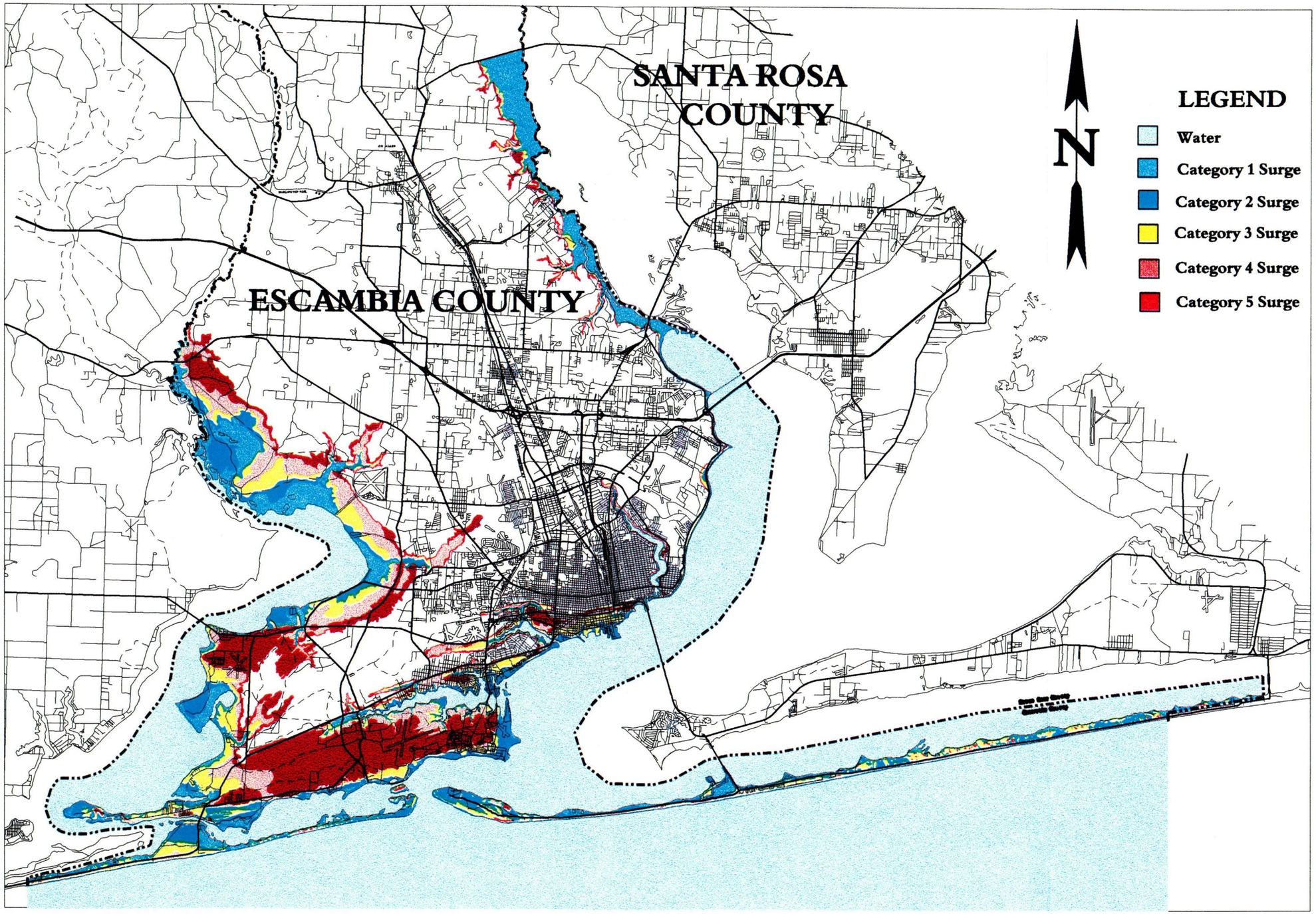
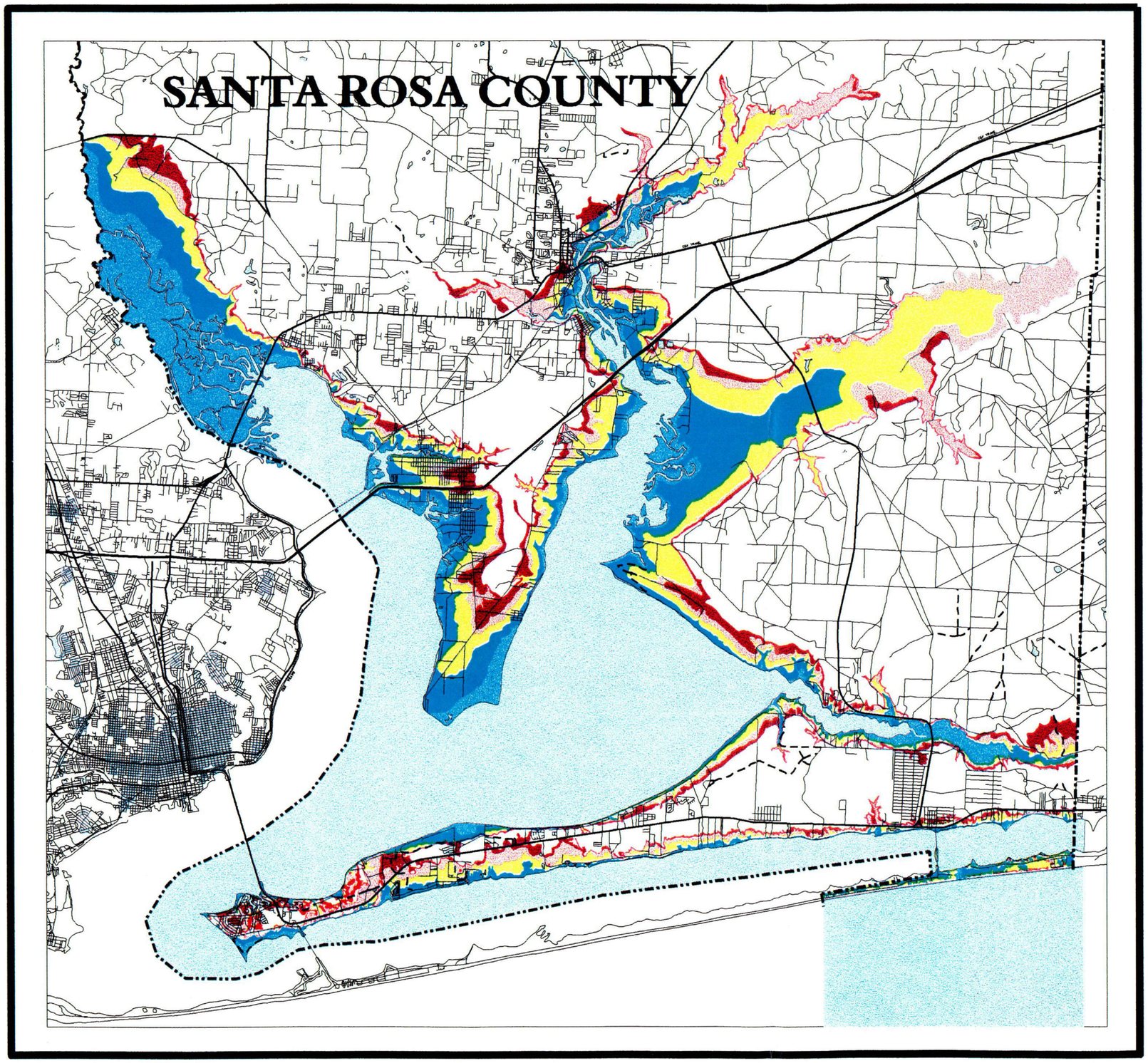


PLATE 2-28



ESCAMBIA COUNTY, FLORIDA HURRICANE SURGE MAP



Northwest Florida
Hurricane Evacuation Study

LEGEND

- Water
- Category 1 Surge
- Category 2 Surge
- Category 3 Surge
- Category 4 Surge
- Category 5 Surge

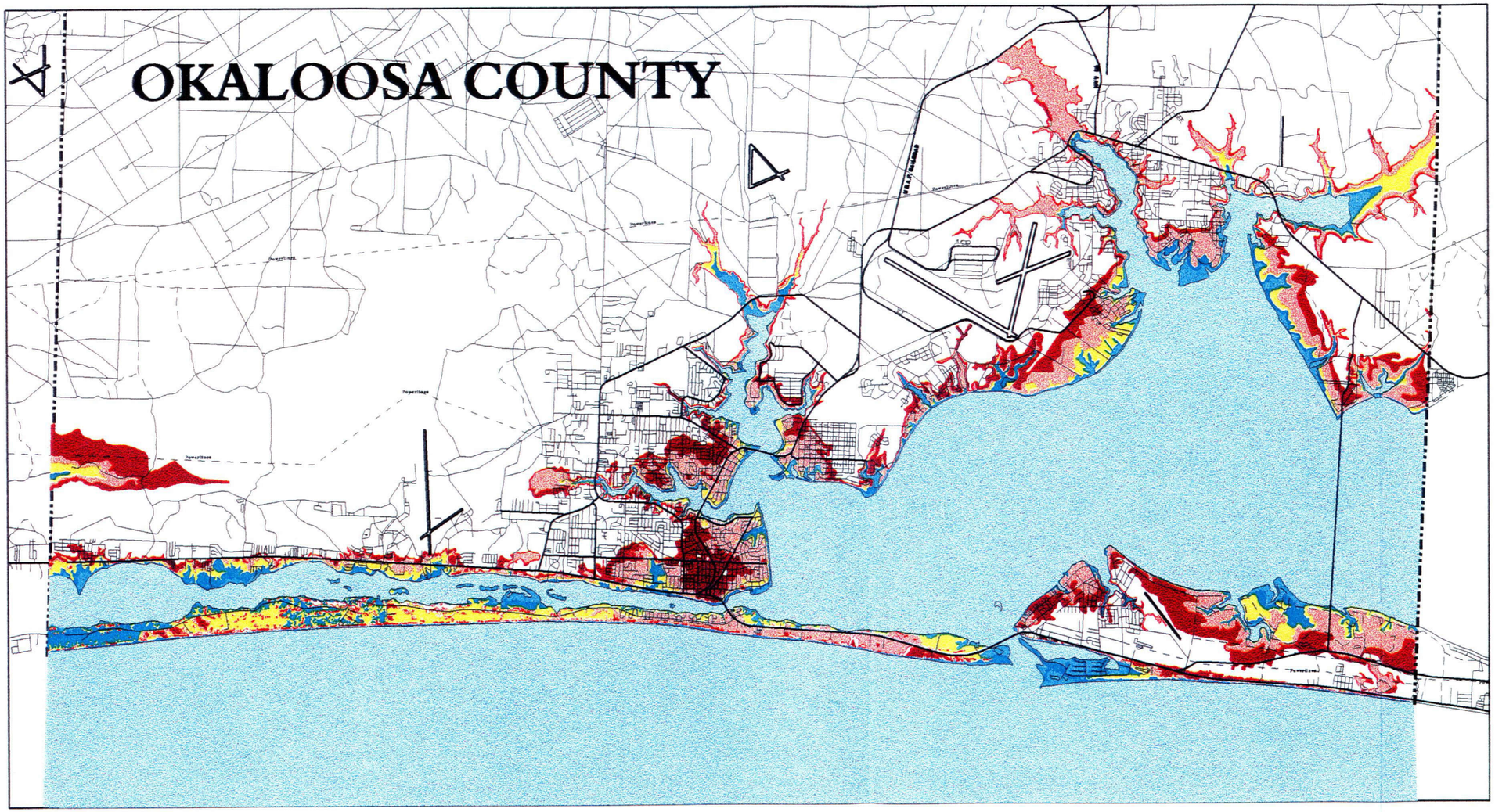
N

SANTA ROSA COUNTY, FLORIDA

HURRICANE SURGE MAP

Plate 2-30

Northwest Florida Hurricane Evacuation Study

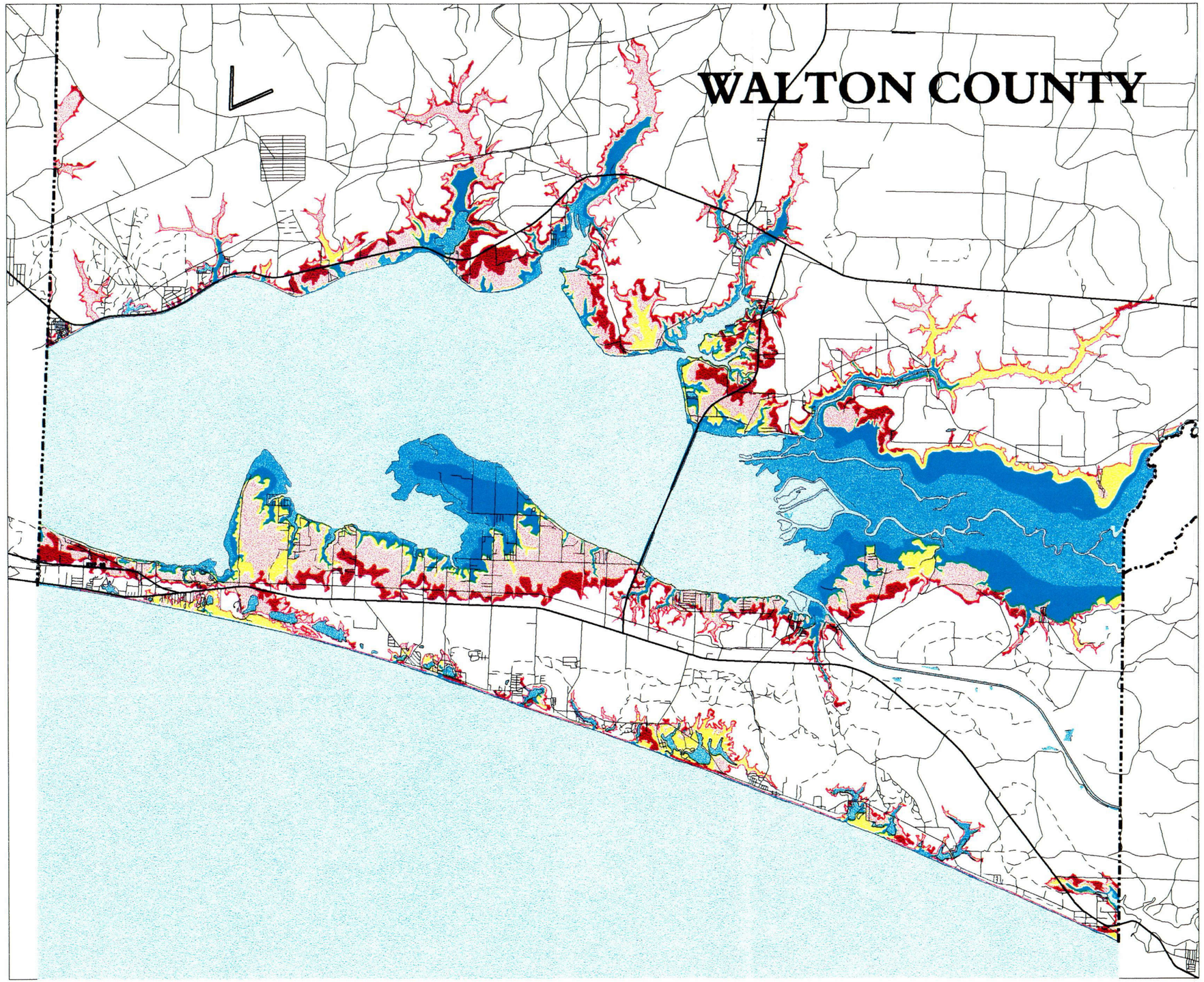


LEGEND

- Water
- Category 1 Surge
- Category 2 Surge
- Category 3 Surge
- Category 4 Surge
- Category 5 Surge

OKALOOSA COUNTY, FLORIDA
HURRICANE SURGE MAP

Plate 2-31



Northwest Florida
Hurricane Evacuation Study

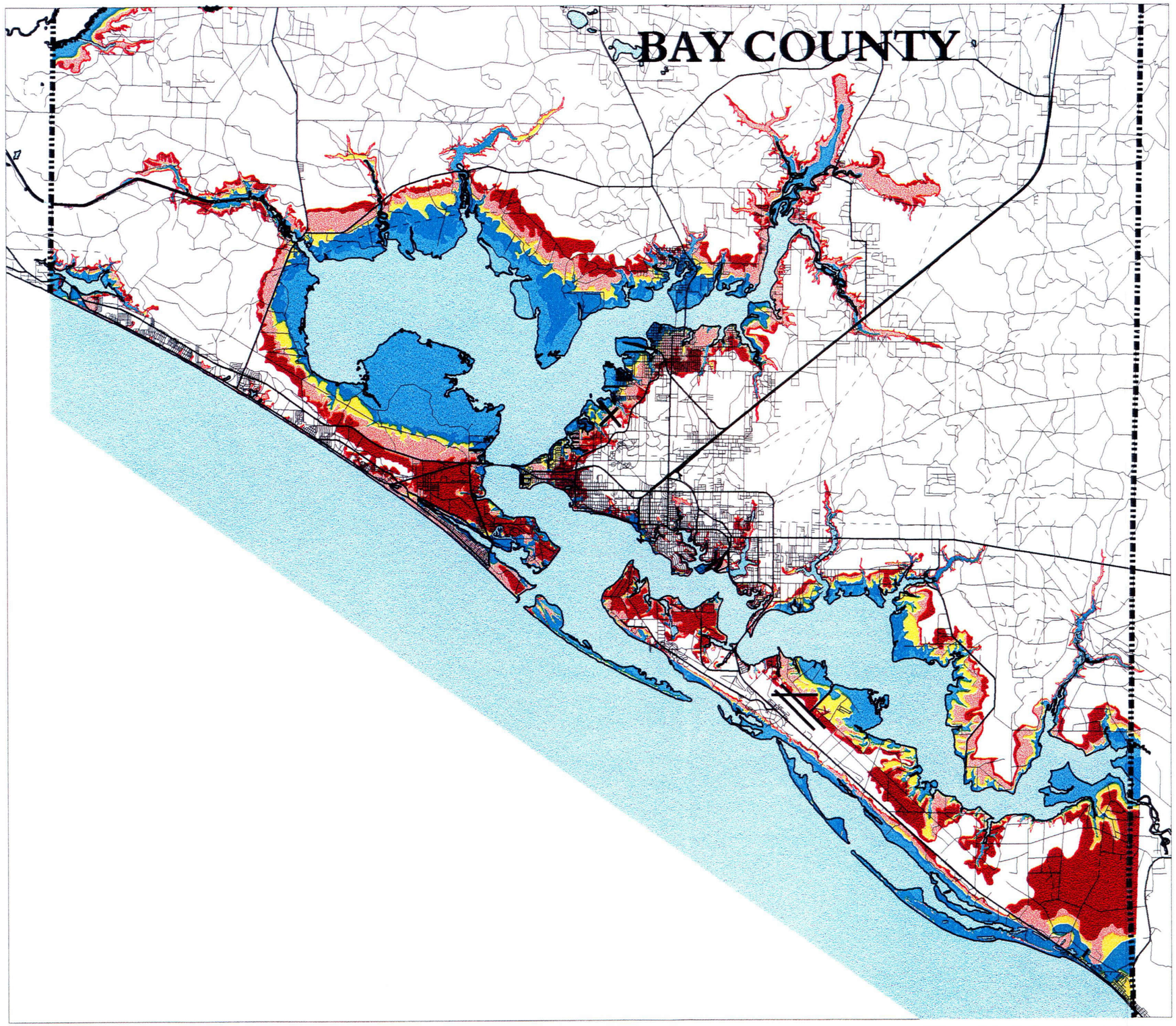
LEGEND

- Water
- Category 1 Surge
- Category 2 Surge
- Category 3 Surge
- Category 4 Surge
- Category 5 Surge

N

WALTON COUNTY, FLORIDA HURRICANE SURGE MAP

Plate 2-32



Northwest Florida
Hurricane Evacuation Study

LEGEND

- Water
- Category 1 Surge
- Category 2 Surge
- Category 3 Surge
- Category 4 Surge
- Category 5 Surge

N

BAY COUNTY, FLORIDA HURRICANE SURGE MAP

Plate 2-33

VULNERABILITY ANALYSIS

CHAPTER THREE - VULNERABILITY ANALYSIS

PURPOSE

The primary purpose of the vulnerability analysis is to identify the areas, populations, and facilities that are vulnerable to storm surge and to wind damage. Storm surge data from the hazards analysis were used to map inundation areas; to develop evacuation scenarios and evacuation zones; to quantify the vulnerable population; and to identify major medical, institutional, and other facilities that are potentially vulnerable to storm surge.

Since mobile homes have proven to be particularly susceptible to wind damage, they have been given special attention in the vulnerability analysis. No attempt has been made to identify other types of construction that may have a high risk of wind damage.

HURRICANE SURGE INUNDATION

Because of unavoidable inaccuracies in hurricane forecasting we cannot predict the exact track a hurricane will take. Within a few hours a hurricane can change its forward speed, intensity and direction which create quite different flooding scenarios at landfall. In response to this uncertainty, hurricane surge mapping depicts the maximum extent of storm surge flooding at high tide that is expected to be produced by any category hurricane regardless of its track or forward speed. Hurricane Surge Atlases showing peak surge flooding for the MOMs discussed in Chapter 2 have been produced as a separate document for each coastal county. The maps are based on still water surge heights that include an upward adjustment for observed tidal anomalies before the arrival of the hurricane, and the coincidence of the surge arriving at the mean high astronomical tide. These factors add an additional +2.0 feet to the computed surge height. Since the extent of flooding will actually depend a great deal on the hurricane track, the overall flooded area shown on the inundation maps for each hurricane category will never be exactly duplicated by a single storm.

The Hurricane Surge Atlases were produced by overlaying the SLOSH grid on U.S. Geological Survey 7.5-minute series topographic maps at scale of 1 inch equals 2,000 feet and manually drawing in the surge boundaries based on the surge elevation for the grid cell and the topography shown on the quad sheet. The surge limits were then digitized over USGS 1:100,000 scale digital base maps. The final atlases were printed in color at a scale of 1 inch equals 4,000 feet by the Florida Division of Emergency Management. There is a separate Atlas for each coastal county.

The estimated depth of flooding at a selected location can be calculated by subtracting the known ground elevation from the surge elevation at that point. The ground elevation can be estimated from the spot elevations on the Atlases or from available topographic mapping. The ground elevation must be referenced to the National Geodetic Vertical Datum. The surge elevation can be determined from the SLOSH grid cell data or estimated by selecting the surge elevation from the nearest time history point.

HURRICANE EVACUATION ZONES

Hurricane evacuation zones are the areas that need to be evacuated for a particular hurricane scenario to protect residents at risk from flooding or high winds. Evacuation zones were developed for each county based on the following parameters:

a. Evacuation zones should include all populated areas having a serious risk of flooding.

b. Evacuation zones may sometimes need to include non-flood areas if they are cut off or completely surrounded by flooded areas.

c. Evacuation zones need to be easily communicated to the public and usually follow well know and easily identifiable geographic features such as major roads, railroads, or other landmarks.

Each of the five coastal counties have delineated three evacuation zones based on the hurricane surge flooding. These evacuation zones have been used to estimate the evacuating population and number of evacuating vehicles. This information is a key element to the transportation analysis. Table 3-1 shows the evacuation zones and the hurricane categories they include for each county. It should be noted that the Category 1 evacuation zone is also considered the coastal high hazard area for the State of Florida and has land use/growth management implications. Plates 3-1 through 3-5 show a map of the evacuation zones for each of the five coastal counties. A written description of the evacuation zones follows Table 3-1.

Table 3-1 Hurricane Evacuation Zones

County	Evacuation Zones	Saffir-Simpson Category	All Residents in Traffic Zones :	& Mobile Home Residents in Traffic Zones:
Escambia	Evacuation Zone Cat1 Evacuation Zone Cat 2-3 Evacuation Zone Cat 4-5	Category 1 hurricane Category 2 or 3 hurricane Category 4 or 5 hurricane	1-4 1-7 1-11	5-21 8-21 12-21
Santa Rosa	Evacuation Zone Cat1 Evacuation Zone Cat 2-3 Evacuation Zone Cat 4-5	Category 1 hurricane Category 2 or 3 hurricane Category 4 or 5 hurricane	1-6 1-13 1-17	7-24 14-24 18-24
Okaloosa	Evacuation Zone Cat1 Evacuation Zone Cat 2-3 Evacuation Zone Cat 4-5	Category 1 hurricane Category 2 or 3 hurricane Category 4 or 5 hurricane	1-4 1-9 1-16	5-27 10-27 17-27
Walton	Evacuation Zone Cat1 Evacuation Zone Cat 2-3 Evacuation Zone Cat 4-5	Category 1 hurricane Category 2 or 3 hurricane Category 4 or 5 hurricane	1-4 1-7 1-9	5-14 8-14 10-14
Bay	Evacuation Zone Cat1 Evacuation Zone Cat 2-3 Evacuation Zone Cat 4-5	Category 1 hurricane Category 2 or 3 hurricane Category 4 or 5 hurricane	1-8 1-16 1-22	9-28 17-28 23-28

EVACUATION ZONE DESCRIPTIONS

a. Escambia County Evacuation Zones

The Category 2-3 evacuation zone for **Escambia** County is as follows:

All of Pensacola Beach, Perdido Key, all areas west of Bauer Rd. from Hwy. 98 to Gulf Beach Hwy., all areas south of Gulf Beach Hwy. in western Escambia County, all areas south of Barrancas Ave. from Navy Blvd. to Bayou Chico, low lying areas along Bayou Chico including Bayou Grove and the area along Jackson Creek, all areas south of Garden St. from Pace Blvd. to Alcaniz St., including areas south of Chase St. from Alcaniz St. to

Bayfront Pkwy, all low lying areas along Bayou Texar, all low lying areas along Scenic Hwy. near Langley Ave., all areas east of Scenic Hwy. from Gull Point to 9 Mile Rd., all areas north of Hwy. 98 from Blue Angle Pkwy. to the Alabama state line, low lying areas along 11 Mile Creek, low Lying areas along Hurst Hammock Rd. south of Mobile Hwy., low lying areas along the Perdido River at Mobile Hwy., all Mobile Homes, and all areas subject to flooding in heavy rains.

The Category 4-5 evacuation zone for **Escambia** County is as follows:

All of Pensacola Beach, Perdido Key, all areas west of Dog Track Rd. to the Alabama state line, all areas south of Gulf Beach Hwy. in western Escambia County, all areas north of Hwy. 98 from Blue Angle Pkwy. west to the Alabama state line, all areas west of Blue Angle Pkwy. from Hwy. 98 north to Cerny Rd., all areas west of Fairfield Dr. from Lillian Hwy. to Patricia Dr., all low lying areas in the subdivisions west of (behind) Saufley Field, Hurst Hammock area, south of Mobile Hwy., all areas around Mobile Hwy. within 1.5 miles east of the Alabama state line, all areas east and south of Navy Blvd. from Gulf Beach Hwy. to Pace Blvd., all areas south of Hwy. 98 from Fairfield Dr. to Navy Blvd., all areas south of Gregory St. and Idlewood Dr. east from New Warrington Rd. to "W" St., all areas south of Gregory St. in the Pensacola City limits, east of 9th Ave., all areas south of Heinburg St., all low lying areas along 11 Mile Creek, south of Mobile Hwy., all low lying areas along Bayou Marcus Creek, all low lying areas along Bayou Texar, all low lying areas along Scenic Hwy. near Langley Ave., all areas east of Scenic Hwy. from Gull Point north to 9 Mile Rd., all mobile homes, all areas subject to flooding in heavy rains.

b. Santa Rosa County Evacuation Zones

The Category 1 evacuation zone for **Santa Rosa** County is as follows:

All of Navarre Beach. Gulf Breeze Peninsula (Navarre, Midway, Gulf Breeze, Holley) - All waterfront areas and all residents who live within 1/4 mile (1300 feet) of water from the Okaloosa County Line along Santa Rosa Sound continuing around Gulf Breeze into Escambia Bay, East Bay and East River.

In East Milton all waterfront areas along Blackwater Bay, the Blackwater and Yellow Rivers and all residents who live within 1/2 mile (2600 feet) of these bodies of water. In Milton the area south of Walker Street and to the east of Henry Street. In Bagdad the area east of Forsyth Street, and along the Blackwater Bay to the east 1/4 mile (1300 feet). In Dickerson City and Garcon Point - All areas within 1/2 mile (2600 feet) of the water.

Avalon Beach, Mulat & Floridatown - All waterfront areas along Escambia Bay and from Garcon Point to Trout Bayou and those areas within a distance of 1/4 mile (1300 feet) of the water. From Trout Bayou north to I-10 a distance of 1 mile or to Avalon Blvd. The area along Escambia Bay, North of I-10 to Cyanamid Road for a distance of 1 mile from the bay. From Cyanamid Road to Highway 90, all areas within 1/4 mile to Escambia Bay.

The Category 2-3 evacuation zone for **Santa Rosa** County is as follows:

All of Navarre Beach. Gulf Breeze Peninsula (Navarre, Midway, Gulf Breeze, Holley) - All waterfront areas and all residents who live within 1/2 mile (2600 feet) of water along Santa Rosa Sound from the Okaloosa County Line to the East border of the Gulf Island National Seashore. For a distance of 1/4 mile (1300 feet) around Gulf Breeze in Escambia Bay, East Bay and East River.

Holley - All waterfront areas for a distance of 1 mile starting on the North side of the East River continuing along East Bay through Holley to Eglin Wildlife Management area, with special emphasis on the creeks and canals in the area. East Milton - All areas along Ward Basin Road for a distance of 1 mile to the East from the road center, except the area from Airport Road to Highway 90. Along Blackwater River north of Highway 90 for a distance of 1/2 (2600 feet) from the banks. Milton - All the areas south of the Blackwater Heritage Trail to Blackwater River and the area from Canal Street and Henry Street to the River. Bagdad - The area east of Forsyth Street and Garcon Point Road to Garcon Point.

Avalon Beach, Mulat & Floridatown - All of the area to the west of Avalon Blvd, from the CSX Rail line. From the CSX Rail Line to Highway 90 for a distance of 1 mile along Escambia Bay. All other area subject to flooding from a storm surge or heavy rainfall such as rivers, creeks, streams and areas with poor drainage systems.

The Category 4-5 evacuation zone for **Santa Rosa** County is as follows:

All of Navarre Beach. Gulf Breeze Peninsula (Navarre, Midway, Gulf Breeze, Holley) - All of the area from the City of Gulf Breeze to Ocean Breeze Lane, or 5 1/2 miles from the east boundary of Gulf Island National Seashore along Gulf Breeze Parkway. Residents who live within 1/2 mile (2600 feet) of the water along Santa Rosa Sound from the Okaloosa County line to Ocean Breeze Lane. For a distance of 1 mile from the water along East Bay and East River through Holley to the Eglin Wildlife Management area.

East Milton - All areas along and for a distance of 1 mile to the east of Ward Basin Road, except the area from the south of Airport Road to Highway 90. Milton - All the areas south of the Blackwater Heritage Trail to Blackwater River and the area from Canal Street and Henry Street to the River. Bagdad - Along Pond Creek for a distance of 1/2 mile from the waterfront. The area east of Forsyth Street and Garcon Point Road to the river as far as I-10. All of the remaining area south of I-10. Garcon Point - All of the area south of I-10.

Avalon Beach, Mulat & Floridatown - All of the area to the west of Avalon Blvd, from the CSX Rail line. From the CSX Rail Line north of Highway 90 for a distance of 1 mile from the water along Escambia Bay. Harold - Along the Yellow river for a distance of 1 mile from the riverbank. All other area subject to flooding from a storm surge or heavy rainfall such as rivers, creeks, streams and areas with poor drainage systems.

c. Okaloosa County Evacuation Zones

The Category 1 evacuation zone for **Okaloosa** County is as follows:

All of Okaloosa Island, all of Holiday Isle, all other waterfront properties on the Gulf, Santa Rosa Sound, Choctawhatchee Bay, and bayous thereof

The Category 2-3 evacuation zone for **Okaloosa** County is as follows:

All of the Category 1 Evacuation zone and all properties on and south of US 98, county line to county line, all properties that lie within the rectangle formed by the following streets: Hollywood Blvd-Memorial Pkwy-Beal-Pky-US 98, Poquito Bayou, Longwood, & Jaymar Shores, all areas west of SR 85 (Eglin Pky) in Shalimar, all areas that lie between Mooney Rd and the water. In Niceville, properties on or on the water side of Bayshore Dr and Redwood Avenue. In the Bluewater Bay/unincorporated Niceville areas, the following residential developments: Edgewater, Live Oak Shores, Shadow Oak, Sailboat cove, Liso Village, Magnolia Lake, Windward, St. Andrews Village West, Miller's Run, Southwind, Sunset Beach Estates, Raintree Estates, Lake Pippin Estates In Valparaiso, properties South of tom's Bayou and East of John Sims Pkwy, all of Destin, all properties not listed above but which are within two blocks of any Bayou or Choctawhatchee Bay.

The Category 4-5 evacuation zone for **Okaloosa** County is as follows:

All areas in Category 1,2 and 3 Evacuation zones plus, all of Florosa and Wynnehaven Beach, all areas south of Hollywood Blvd in Mary Esther and Ft. Walton Beach East of Beal Pky in the city limits of Ft. Walton Beach, all of Cinco Bayou, all of Shalimar. In Ocean City, the area South of Riverside Dr. and North of Lovejoy Rd., and the areas South Lewis St & Mayflower Ave to the bayou; areas East of James Lee Rd. In Niceville, All property on and west of Palm Blvd that is also South of John Sims Pky.; all property South of Valparaiso Blvd; and all property that lies South of John Sims Pky but East of a line drawn through Wise Av-and Nutmeg Ave. In Bluewater Bay/unincorporated Niceville, Magnolia forest, Hidden Lakes, Fairway Lakes, Oaklake, St. Andrews Village South, Glenlake, Carribbean Village South, and White Point Village. In Valparaiso, all property East of John Sims Pky or South of Okaloosa Ave.

d. Walton County Evacuation Zones

The Category 1 evacuation zone for **Walton** County is as follows:

The coastal areas on the Gulf and Choctawhatchee Bays and other areas susceptible to flash flooding.

The Category 2&3 evacuation zone for **Walton** County is as follows:

The entire County, South of the Choctawhatchee Bay and Coastal areas on the north shore of the Bay

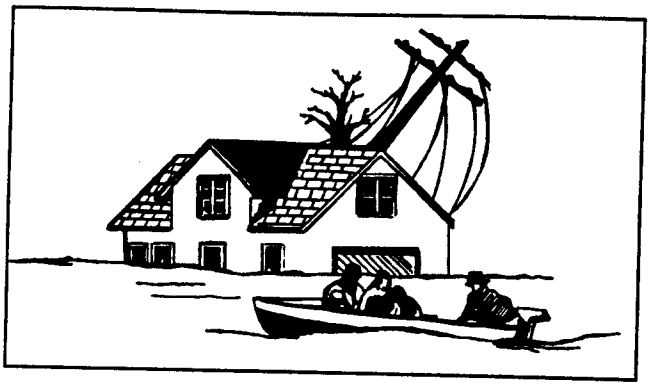
The Category 4&5 evacuation zone for **Walton** County is as follows:

All of the Category 1 - 3 evacuation zones described above plus some further zones along the tributaries along the north shore of the Bay and some further evacuations along the lower Choctawhatchee River Basin.

e. Bay County Evacuation Zones

Bay County issues evacuation orders by evacuation zones and refers the public to the evacuation zone maps printed in their phone books. They also provide digital copies of the evacuation zone maps to the media so they can describe the areas to the public.

VULNERABLE POPULATION



The vulnerable population, or population at greatest risk are persons residing within the evacuation zones subject to storm surge and the residents of mobile homes which may be threatened by hurricane force winds. Mobile home residents are usually advised to evacuate when they may be subjected to hurricane winds because of their proven vulnerability to hurricane force winds. The tourist population varies with the tourist season. For the purposes of this study a low and high tourist population has been estimated. The high tourist population is based on 90% occupancy of tourist units and the low tourist population is based on 30%. Table 3-2 summarizes the vulnerable population by non-mobile home residents, mobile home residents and tourists for different evacuation scenarios compared to the total county population for the year 2000. Table 3-3 shows figures for the year 2005. Figure 3-1 on the next page shows that most of the regions population is located in or near the hurricane surge hazard area.

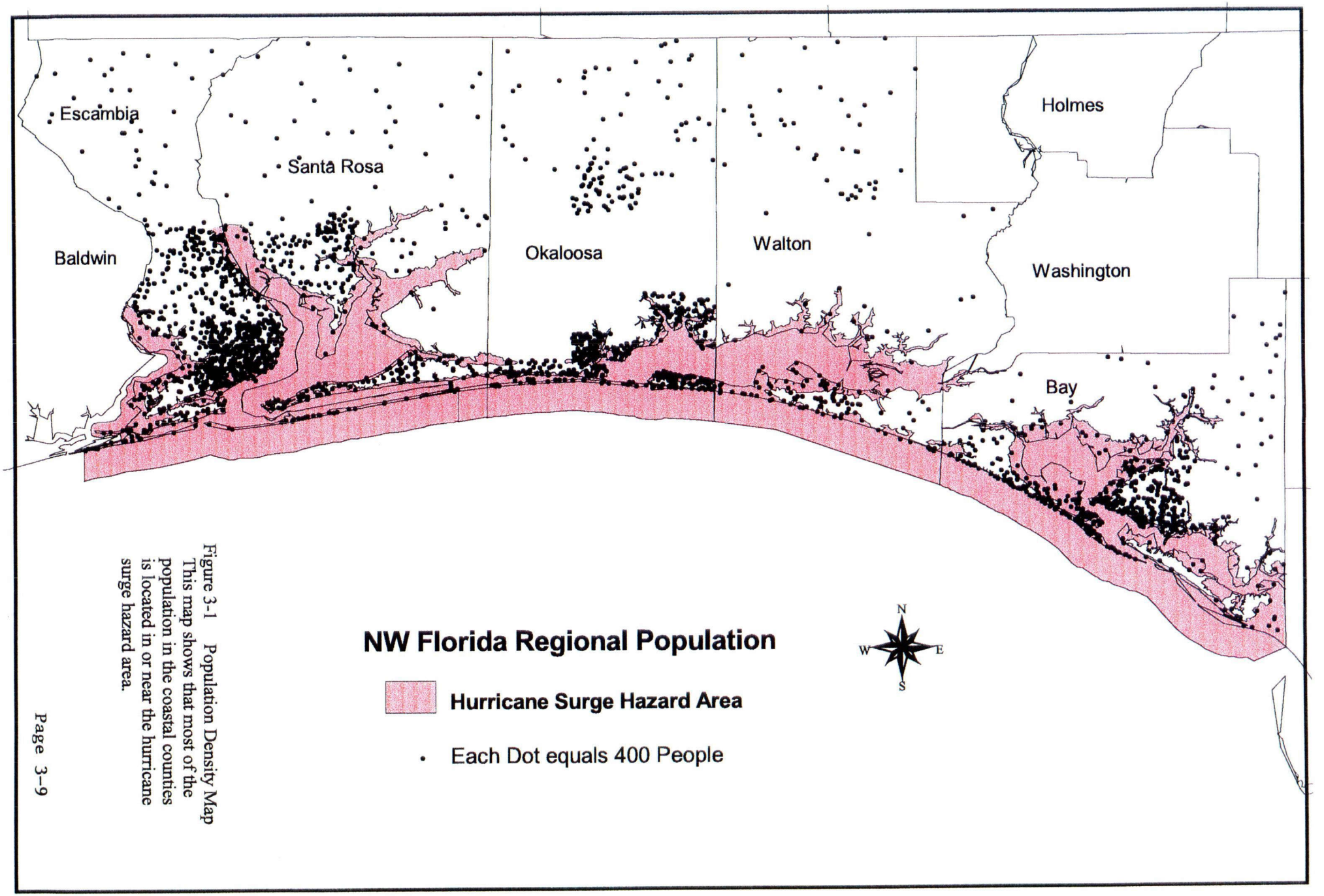


Figure 3-1 Population Density Map
This map shows that most of the population in the coastal counties is located in or near the hurricane surge hazard area.

Table 3-2 Vulnerable & Total Population by Evacuation Zone
(Based on the Year 2000 population estimates)

County/Evacuation Zone Column 1	Mobile Home Surge Vulnerable Population	Total Mobile Home Population	Non-Mobile Home Surge Vulnerable Population	Surge Vulnerable Tourist Population	Vulnerable Population Columns 3+4+5 Total
ESCAMBIA COUNTY	Column 2	Column 3	Column 4	Column 5	
Total Population	33,636	33,636	270,850	18,149	322,635
Category 1 Evacuation Zone	483	33,636	18,748	6,545	58,929
Category 2-3 Evacuation Zone	1,555	33,636	32,323	7,796	73,755
Category 4-5 Evacuation Zone	5,369	33,636	63,661	8,055	105,352
SANTA ROSA COUNTY					
Total Population	24,915	24,918	88,933	3,912	117,760
Category 1 Evacuation Zone	2,648	24,918	11,784	2,907	39,606
Category 2-3 Evacuation Zone	5,159	24,918	18,693	2,913	46,521
Category 4-5 Evacuation Zone	7,509	24,918	30,447	3,392	58,754
OKALOOSA COUNTY					
Total Population	20,676	20,676	156,009	34,302	210,986
Category 1 Evacuation Zone	385	20,676	11,409	24,096	56,180
Category 2-3 Evacuation Zone	2,647	20,676	32,125	31,067	83,867
Category 4-5 Evacuation Zone	7,364	20,676	67,717	31,620	120,012
WALTON COUNTY					
Total Population	12,268	12,268	22,879	24,717	59,864
Category 1 Evacuation Zone	1,058	12,268	4,153	10,326	26,747
Category 2-3 Evacuation Zone	4,145	12,268	8,176	24,717	45,161
Category 4-5 Evacuation Zone	5,870	12,268	8,498	24,717	45,483
BAY COUNTY					
Total Population	34,114	34,114	120,838	74,319	229,269
Category 1 Evacuation Zone	1,758	34,114	13,875	35,792	83,779
Category 2-3 Evacuation Zone	8,115	34,114	44,286	55,988	134,386
Category 4-5 Evacuation Zone	17,326	34,114	66,924	71,700	172,736
HOLMES COUNTY					
Total Population	5,080	5,080	12,920	N.A.	18,000
Category 1 Evacuation Zone	5,080	5,080	0		5,080
Category 2-3 Evacuation Zone	5,080	5,080	0		5,080
Category 4-5 Evacuation Zone	5,080	5,080	0		5,080
WASHINGTON COUNTY					
Total Population	5,588	5,588	16,212	N.A.	21,800
Category 1 Evacuation Zone	5,588	5,588	0		5,588
Category 2-3 Evacuation Zone	5,588	5,588	0		5,588
Category 4-5 Evacuation Zone	5,588	5,588	0		5,588

Table 3-2a Vulnerable & Total Population by Evacuation Zone
(Based on the Year 2005 population estimates)

County/Evacuation Zone Column 1	Mobile Home Surge Vulnerable Population	Total Mobile Home Population	Non-Mobile Home Surge Vulnerable Population	Surge Vulnerable Tourist Population	Vulnerable Population Columns 3+4+5 Total
ESCAMBIA COUNTY	Column 2	Column 3	Column 4	Column 5	
Total Population	36,932	36,932	297,393	19,928	354,253
Category 1 Evacuation Zone	530	36,932	20,585	7,186	64,704
Category 2-3 Evacuation Zone	1,707	36,932	35,491	8,560	80,983
Category 4-5 Evacuation Zone	5,895	36,932	69,900	8,844	115,676
SANTA ROSA COUNTY					
Total Population	30,247	30,247	107,965	4,749	142,961
Category 1 Evacuation Zone	3,215	30,247	14,306	3,529	48,082
Category 2-3 Evacuation Zone	6,263	30,247	22,693	3,536	56,476
Category 4-5 Evacuation Zone	9,116	30,247	36,963	4,118	71,327
OKALOOSA COUNTY					
Total Population	24,832	24,831	187,367	41,197	253,394
Category 1 Evacuation Zone	462	24,831	13,702	28,939	67,472
Category 2-3 Evacuation Zone	3,179	24,831	38,582	37,311	100,724
Category 4-5 Evacuation Zone	8,844	24,831	81,328	37,976	144,134
WALTON COUNTY					
Total Population	13,802	13,802	25,739	27,807	67,347
Category 1 Evacuation Zone	1,190	13,802	4,672	11,617	30,090
Category 2-3 Evacuation Zone	4,663	13,802	9,198	27,807	50,806
Category 4-5 Evacuation Zone	6,604	13,802	9,560	27,807	51,168
BAY COUNTY					
Total Population	38,003	38,001	134,614	82,791	255,406
Category 1 Evacuation Zone	1,958	38,001	15,457	39,872	93,330
Category 2-3 Evacuation Zone	9,040	38,001	49,335	62,371	149,706
Category 4-5 Evacuation Zone	19,301	38,001	74,553	79,874	192,428
HOLMES COUNTY					
Total Population	5,756	5,756	14,638	N.A.	20,394
Category 1 Evacuation Zone	5,756	5,756	0	N.A.	5,756
Category 2-3 Evacuation Zone	5,756	5,756	0	N.A.	5,756
Category 4-5 Evacuation Zone	5,756	5,756	0	N.A.	5,756
WASHINGTON COUNTY					
Total Population	6,504	6,504	18,871	N.A.	25,375
Category 1 Evacuation Zone	6,504	6,504	0	N.A.	6,504
Category 2-3 Evacuation Zone	6,504	6,504	0	N.A.	6,504
Category 4-5 Evacuation Zone	6,504	6,504	0	N.A.	6,504

CRITICAL FACILITIES

Critical facilities include facilities that may need assistance or special consideration during evacuation or immediately after the storm has past. Medical facilities, nursing homes or correctional institutions are examples of critical facilities needing special consideration and planning if they are to be evacuated. Other critical facilities include those that supply critical services and supplies after a hurricane such as food, water, power, fuel, medical services and building and repair supplies. Tables 3-3 through 3-10, at the end of this Chapter, list the critical facilities compiled by each County.

Administrative officials should be aware of the potential for wind damage to multi-story buildings. Post-hurricane surveys in other areas show that extreme winds can inflict major damage to substantial structures, exposing occupants to life-threatening danger. Hurricane preparedness plans based on moving people from potential surge levels vertically to upper floors must take into account the location and size of windows and doors, as well as the structural integrity of the building itself. Agencies responsible for hurricane preparedness of special needs facilities (hospitals, nursing homes, adult homes, and correctional facilities) should ensure that proper attention is given to the complex task of planning and coordinating emergency response.

EVACUATION ROUTE FLOODING

Evacuation route flooding can be caused by rainfall runoff and storm tide. Hurricane evacuations are normally timed so that evacuees can reach safe shelter prior to the arrival of sustained tropical storm winds. Because of the wide variation in amounts and times of occurrence from one storm to another, rainfall can only be addressed in general terms. For most hurricanes, the heaviest rainfall begins near the time of arrival of sustained tropical storm winds. In some cases, however, over 20 inches of rain has preceded an approaching hurricane by as much as 24 hours. The County emergency management office should increase clearance times if it appears that the capacity of any evacuation routes would be reduced as a result of flooding prior to or during the evacuation.

Shown below is a listing of potential roads that are subject to flooding during heavy rains.

ESCAMBIA COUNTY POTENTIAL ROAD FLOODING

Major roadways subject to fresh water flooding in Escambia County are:

- Highway 29 1/2 mile south of the Alabama state line in the Town of Century.
- Highway 29 at Pine Barren Creek.
- Highway 29 at Jack's Branch (approx. 3 miles north of Cantonment).
- Highway 29 at Pin Oak Dr. (approx. 2 miles north of Cantonment).
- Highway 97 (Atmore Highway) at Wiggins Creek.
- Bauer Road north of Sorrento Road.

SANTA ROSA COUNTY POTENTIAL ROAD FLOODING

Major roadways subject to fresh water flooding in Santa Rosa County are:

Highway 87 South, within 1 or 2 miles of the East River due to heavy rains, flooding the creeks.

Stretches of Highway 89 in the Midway area from heavy rainfall.

Highway 87 North, north of Whiting Field has had problems in the past due to heavy rainfall. Some improvements have been made but not tested.

Highway 90 (Escambia Fill) has been closed due to storm surge. We expect all evacuation to be completed before this happens.

OKALOOSA COUNTY POTENTIAL ROAD FLOODING

Major roadways subject to fresh water flooding in Okaloosa County are:

US 98 vicinity of Hurlburt Main Gate
US 98 at intersection of Santa Rosa Blvd
Santa Rosa Blvd
Airport Rd (Destin)
SR 85 north of Laurel Hill at Horsehead Creek
CR 393 between Pond Creek and Shoal River
SR85 (Eglin Pky) from Shalimar Bridge to Ninth Ave, Shalimar
SR 20 (Niceville) at Turkey Creek
Racetrack Road, Ft. Walton Beach

WALTON COUNTY POTENTIAL ROAD FLOODING

Major roadways subject to fresh water flooding in Walton County are:

State Highway 81 at Bruce Creek. (Which floods when the Choctawhatchee reaches 18 to 19 feet).

County Highway 181C at Cedar Log Lake (Which floods when the Choctawhatchee reaches 17 to 18 feet).

County Highway 1087 at the Shoal River Bridge.

BAY COUNTY POTENTIAL ROAD FLOODING

Major roadways subject to fresh water flooding in Bay County are:

This information will be provided at a later date.

HOLMES COUNTY POTENTIAL ROAD FLOODING

A major roadway subject to fresh water flooding in Holmes County is:
US 81 north of Highway 2.

WASHINGTON COUNTY

Major roadways subject to fresh water flooding in Walton County are:

Highway 79 north of Ebro and just north of Holmes County Line near Doudlas Ferry Road.
Highway 77 along areas between Chipley and Wausau.
Highway 277 at the intersection of Oswald Road.
Highway 277 in the area known as Walkers Stretch just north of Culpepper Lane along Holmes Creek.

EMERGENCY TRANSPORTATION NEEDS

Evacuation preparedness plans should consider all persons who do not have access to a private vehicle and therefore would have to rely on public transportation for evacuation. Local government should attempt to arrange for adequate resources to meet the demand for public transportation. Planning for adequate special needs emergency transportation for residents in private homes is usually the responsibility of local emergency management officials, while transportation for those in health-related facilities should be the responsibility of the individual facilities. Although detailed information concerning residents of private homes may be difficult to obtain, each local government should develop procedures for maintaining an up-to-date roster of persons likely to need special assistance. Non-ambulatory patients will require transportation that can easily accommodate wheelchairs, stretchers, and, possibly, life-sustaining equipment. Lack of resources for these needs could result in critical evacuation delays and increased hazards for the evacuees. The Special needs population for each county is listed below:

County	Estimated Special Need Population
Escambia County	1800-2500
Santa Rosa County	400
Okaloosa County	1400
Walton County	200
Bay County	
Holmes County	500
Washington County	

MOBILE HOME AND R.V. PARKS

The location and capacity of existing mobile home parks and recreational vehicle (R.V.,campers) facilities is also critical because it is recommended that all of them be evacuated for any storm threat that would result in hurricane force winds. A list of these facilities for each county is shown below.

ESCAMBIA COUNTY MOBILE HOME AND R.V. PARKS

Park Name	Park type	Address	Spaces
Deluna Village Mh Park	Mobile Home	4005 W. Bobe St	200
Andover Woods Mh Park	Mobile Home	1000 S. Farifield Dr	200
Bayou Landing	Mobile Home	9424 Boca Del Cir	49
Bel Mar Mh Park	Mobile Home	1523 Gulf Beach Hwy	61
Blue Angel Mh Park	Mobile Home	5301 Blue Angel Pkwy	30
Bob's Trailer Court	Mobile Home	4967 Mobile Hwy	20
Booker's Mh Park	Mobile Home	5800 Lillian Hwy	50
Catalina Mh Estates	Mobile Home	9716 W. Hwy 98	175
Flamingo Mh Park	Mobile Home	2801 W. Nine Mile Rd	25
King George Estates	Mobile Home	5400 Mobile Hwy	160
Live Oak Mh Park	Mobile Home	901 Massachusetts Av	40
Oak Grove Mh Park	Mobile Home	1801 Border St	40
Oak Lodge Mh Park	Mobile Home	7101 Lillian Hwy	30
Palafox Mh Park	Mobile Home	9000 N. Palafox	36
Patricia Mh Park	Mobile Home	7318 Hayward St	35
Sabal Palm Mh Park	Mobile Home	2601 Patricia Dr	60
Silver Lake Mh Park	Mobile Home	7333 Pine Forest Rd	190
Tanglewood Gardens	Mobile Home	6530 N. Palafox St	44
Timberlake Mh Park	Mobile Home	2600 W. Michigan Ave	230
West Florida Mh Park	Mobile Home	550 E. Nine Mile Rd	45
Woodridge Park	Mobile Home	7722 N. Palafox St	50
Bayou Grande Mh Park	Mobile Home	8655 Gulf Beach Hwy	200
Rustic Acres Mh Park	Mobile Home	8150 N. Palafox St	50
Maple Leaf Mh Park	Mobile Home	Music Lane	100
Oaks Mh Park	Mobile Home	701 N. Old Corry	30
Admiral Mh Park	Mobile Home	8121 Lillian Hwy	180
All Star Rv Park	R.V. Park	13621 Perdido Key Dr	200
Big Lagoon State Park	R.V. Park	12301 Gulf Beach Hwy	150
Ft Pickens Rv Park	R.V. Park	Ft Pickens Rd	200
Lake Stone Campgrounds	R.V. Park	801 W. Highway 4	100
TOTAL			2980

SANTA ROSA COUNTY MOBILE HOME AND R.V. PARKS

Park Name	Address	Park type	Spaces
By the Bay Village	1527 Magnolia Manor Dr	Mobile Home	6
Colemans Court	6101 East Bay Blvd	Mobile Home	7
Magnolia Manor	1526 Magnolia Manor dr	Mobile Home	25
Snapper Hitch	1630 Red Fish Point rd	Mobile Home	12
Tradewinds	7286 Gulf Breeze Pkwy	Mobile Home	11
Westvic Holiday Sands	Sunny Oak dr	Mobile Home	6
Rebecca's Hollow	3251 Bob Tolbert rd	Mobile Home	10
Millers Bluff Fish Camp	12375 Shammah rd	Mobile Home	12
Lunsford's	Custer Lane	Mobile Home	12
Simmons	9112 Roy Cook rd	Mobile Home	10
Abc	3216 Hwy 87 n	Mobile Home	19
Bagdad	661 Old Bagdad Hwy	Mobile Home	8
Barnes	4059 Driskill rd	Mobile Home	14
Browns Fish Camp	3400 Ward Basin rd	Mobile Home	9
D&d	4066 Dawson Lane	Mobile Home	9
Dan Weaver	6430 Whiting Ave	Mobile Home	8
East Bay	1160 Pine st	Mobile Home	8
East Gate Ranch	Whiting East Gate rd	Mobile Home	27
Edgewood	West Milton Heights	Mobile Home	5
Falcon Place	Hwy 89 n	Mobile Home	10
Fays (Britt D's)	6401 Howard Ave	Mobile Home	7
Hammville	8700-8720 John Hamm rd	Mobile Home	7
J&j	134 Kingery rd	Mobile Home	6
J&j Ponderosa	5925 Carroll rd	Mobile Home	17
James L Broxson	Garcon Point rd	Mobile Home	6
K&n	6484 Howard Ave	Mobile Home	13
Lazy Acre	506 Conecuh St/507 Broad st	Mobile Home	8
Mary L Vaughn	7174 Hwy 89 n	Mobile Home	6
North Side	702 Alabama st	Mobile Home	10
Pollards	1201 Allen st	Mobile Home	12
Roberts Country	7274 Milford rd	Mobile Home	12
Shadyoaks	810 Munson Hwy	Mobile Home	10
Ski-land Fish Camp	4109 Driskell rd	Mobile Home	10
Southern Hills	Avalon Blvd	Mobile Home	8
Sunburst Resort Inc	2375 Horne rd	Mobile Home	36
Sunshine Park	4336 Sunshine Pk dr	Mobile Home	9
The Oaks	4335 Garcon Point rd	Mobile Home	10
The Pines Village	1024 Garcon Point rd	Mobile Home	17
Vanity Fair	1415 Vanity Fair rd	Mobile Home	13
Village Estates	6400 Bruce Lane	Mobile Home	40
Westgate	26 Westgate Dr Hwy 87 n	Mobile Home	25
Black Jack	Black Jack Cir	Mobile Home	4
Colonial Pines	2101 Colonial Ave	Mobile Home	176
Falconhurst	2000 Falconhurst Place	Mobile Home	7
Ferrells	2224 Crescentwood rd	Mobile Home	6
Hardies #1	9950 Hwy 98w	Mobile Home	19

SANTA ROSA COUNTY MOBILE HOME AND R.V. PARKS (con't)

Park Name	Address	Park type	Spaces
Hardies #2	90-99 Windtrace North	Mobile Home	6
Hardies #3	507 Luneta st	Mobile Home	3
Navarre	#10 Kiefernwald Cir	Mobile Home	21
Navarre East	9212 Eagle Nest dr	Mobile Home	18
Paisley Shores	6945 Navarre Pkwy	Mobile Home	25
Rainbow	Carlos and Granada	Mobile Home	9
Robert Carl	9265 Deer Lane	Mobile Home	5
Sound Side Manor	Blankenship rd	Mobile Home	9
Still Waters	2105 Tom st	Mobile Home	30
Sunset Pines	405 Sunset Lane	Mobile Home	12
Zumbiels	9288 Deer Lane	Mobile Home	6
Bay Breeze	Kentwood St/burns/san Diego st	Mobile Home	28
Bay View	3957 Parkview st	Mobile Home	27
Braxton	4724 Jerry dr	Mobile Home	23
Carters (Bowen's)	3902 Bowens Court	Mobile Home	6
Dallas	3931 Hwy 90	Mobile Home	24
Florlanda	4572 Florlanda cr	Mobile Home	20
Holden	4440 Pace Lane	Mobile Home	14
Hudson's Village	4374 Jernigan rd	Mobile Home	16
Jernigan	4451 Jernigan Rd	Mobile Home	21
King Oaks	1090 Pace Lane	Mobile Home	16
Landmark	4755 Landmark Lane	Mobile Home	7
Pace	4025 Vern st	Mobile Home	15
Palomino	4627 Woodbine rd	Mobile Home	10
Pea Ridge	4584 Tamarind dr	Mobile Home	10
Quail Run	4569 Waldrop Cir	Mobile Home	21
Rivera Naturist Resort	5000 Gurensey rd	Mobile Home	29
Starlite	4001 Wilkes st	Mobile Home	6
Tamarind	4581 Tamarind dr	Mobile Home	9
Westmont	4581 Davenport ln	Mobile Home	25
Cherokee	5255 Gulf Breeze Pkwy	R.V. Park	25
Hunter Rest	6240 Suncrest Court	R.V. Park	6
The Flea Market	5760 Gulf Breeze Pkwy	R.V. Park	8
Blackwater State Park	7720 Deaton Bridge rd	R.V. Park	30
Bear Lake Rec Area	1 1/2 Miles East of Hwy 4	R.V. Park	40
By the Bay	5550 Michael dr	R.V. Park	35
Cedar Lake	4312 Coachman rd	R.V. Park	35
Cedar Pines	Hwy 87 n	R.V. Park	41
Coldwater Recreational Area	4 Mi S of Hy 4 off of Hy 87n	R.V. Park	65
Gulf Pines Family Resort	8700 Gulf Pines dr	R.V. Park	66
Helen's	4165 Ward Basin rd	R.V. Park	9
Lake Kristina	11111 Munson Hwy	R.V. Park	50
Sunny Acres Resort	3700 Garcon Point rd	R.V. Park	27
Krul Recreation Area	3/4 Mi E of Hy 191 on Hy 4	R.V. Park	55
Emerald Beach	8899 Navarre Pkwy	R.V. Park	50
Magnolia Beach	9807 Navarre Pkwy	R.V. Park	50
Navarre Beach	9201 Navarre Pkwy	R.V. Park	167
TOTAL			1952

OKALOOSA COUNTY MOBILE HOME AND R.V. PARKS

Park Name	Address	Park type	Spaces
Action on Blackwater River	Hwy 4, Baker	R.V. Park/Camp	6
Anchor Trailer Park	23rd St, Niceville	Mobile Home	8
Archway Trailer Park	300 Eccles Rd, FWB	Mobile Home	34
Astor Mobile Home Park	71 6th St, Shalimar	Mobile Home	80
Azalea Trailer Park	326 Carmel Dr, FWB	Mobile Home	49
Bay Cove Trailer Park	200 Bayou Dr, FWB	Mobile Home	15
Bayview Courtyard	749 Beach Dr, Destin	R.V. Park/Camp	11
Bayview Courtyard	749 Beach Dr, Destin	Mobile Home	1
Beal's Mobile Home Park	Hwy 98 W, M.E.	Mobile Home	8
Betty's Trailer Park	662 Denton Bvd, FWB	Mobile Home	21
Bill's Trailer Park	Madison Av, Niceville	Mobile Home	19
Blueberry Country Estates	Hwy 85 N, Crestview	Mobile Home	22
Brad Mar Trailer Park #2	843 Hazel Dr, FWB	Mobile Home	13
Brad Mar Trailer Park #1	124 Air Force, FWB	Mobile Home	6
Brook Meade Trailer Park	425 Brook Meade, Crestview	Mobile Home	6
Buddy's Trailer Park	119 Siebert, Destin	Mobile Home	9
Cameron's Trailer Park	208 Casper Dr, FWB	Mobile Home	7
Cannons Trailer Park	Hwy 90 W, Crestview	Mobile Home	18
Cedar Creek Trailer Park	5301 Hare St, Crestview	R.V. Park/Camp	5
Cedar Creek Trailer Park	5301 Hare St, Crestview	Mobile Home	28
Cedar Crest Mobile Hm Park	230 Siebert, Destin	Mobile Home	8
Coachlight Trailer Park	705 Lloyd St, FWB	Mobile Home	8
Country Breeze #2	523 Union St, FWB	Mobile Home	18
Country Breeze #3	315 Green Acres Rd, FWB	Mobile Home	6
Crosswinds	Spruce St, Mary Esther	Mobile Home	6
Crystal Beach Campground	2825 Old Hwy 98 E, Destin	R.V. Park/Camp	65
Crystal Beach Campground	2825 Old Hwy 98 E, Destin	Mobile Home	10
Deerland Trailer Park	1501 N Partin Dr, Niceville	Mobile Home	71
Denton Trailer Park	675 Denton Blvd, FWB	Mobile Home	15
Destin Campground	206 Beach Dr, Destin	R.V. Park/Camp	40
Destin Campground	206 Beach Dr, Destin	Mobile Home	22
Destin Marina & Trailer Park	7 Calhoun Av, Destin	Mobile Home	10
Destin RV Resort	3175 Cobia St, Destin	R.V. Park/Camp	12
Destin RV Resort	3175 Cobia St, Destin	Mobile Home	23
Dixie Trailer Park	46 3d St, Shalimar	Mobile Home	30
Dreamland Trailer Park	Reeves St, Niceville	Mobile Home	29
Duty's Trailer Park	315 Siebert Ave, Destin	Mobile Home	9
Earl & Rosemarie Cobb	117 Beach Dr, FWB	Mobile Home	16
East Blueberry Country Est.	5975 Blackberry L Crestview	Mobile Home	18

OKALOOSA COUNTY MOBILE HOME AND RV PARKS (con't)

Park Name	Address	Park type	Spaces
East Gate Trailer Park	John Sims Pky, Valparaiso	Mobile Home	22
Echo Cove Trailer Park	1724 23d St, Niceville	Mobile Home	6
Evans Trailer Park	729 Green St, FWB	Mobile Home	7
Fairview Hhts Mobile Hm Pk	818-7 Fairview Dr, FWB	Mobile Home	8
Forest Grove Trailer Park	1318 Lewis Turner Bvd, FWB	Mobile Home	54
Forest Heights Trailer Park	820 Tanager Dr, FWB	Mobile Home	10
Fred Gannon Rocky Bayou	4281 Hwy 20 E, Niceville	R.V. Park/Camp	42
Funland Trailer Court	825 Eglin Pky, FWB	Mobile Home	9
Gant's Trailer Park	Laurel Hill	Mobile Home	16
Grant's Trailer Park	Lakeview, Mary Esther	Mobile Home	9
Gray's Trailer Park	678 Kehlman Rd, FWB	Mobile Home	9
Greenwood Mobile Home Pk	103 Jackson St, FWB	Mobile Home	34
Hardies Mobile Home Park	662 S Denton Bvd, FWB	Mobile Home	19
Hayes Trailer Park	214 East Park Av Niceville	R.V. Park/Camp	9
Hayes Trailer Park	214 East Park Av Niceville	Mobile Home	4
Hilltop Trailer Park	931 W James Lee, Crestview	Mobile Home	14
Holiday Lake Travel Park	4050 Ferdon Bvd, Crestview	R.V. Park/Camp	35
Holiday Lake Travel Park	4050 Ferdon Bvd, Crestview	Mobile Home	1
Homestead Trailer Park	Bailey Dr, Niceville	Mobile Home	112
Houston Park	239 Carmel Dr, FWB	Mobile Home	6
Hudson's Mobile Home Park	880 Mayo Trail, Crestview	Mobile Home	16
Hurricane Lake North	Beaver Crk Rd, N of Crestvw	R.V. Park/Camp	18
Hurricane Lake South	Beaver Crk Rd, N of Crestvw	R.V. Park/Camp	18
Jack Parker Trailer Park	814 Tanager Dr, FWB	Mobile Home	24
Karick Lake North	Hwy 189, 5m N of Baker	R.V. Park/Camp	15
Karick Lake South	Hwy 189, 5m N of Baker	R.V. Park/Camp	15
Kenyon's Trailer Park	156 Rickey Ave, FWB	Mobile Home	11
Killingsworth Mobile Hm Pk	106 Lincoln Dr, FWB	Mobile Home	8
Knowlton's Trailer Park	Cedar St, Niceville	Mobile Home	6
L & M Trailer Park	1504 27th St, Niceville	Mobile Home	11
Larson Trailer Park	Hawkins & Bradford, FWB	Mobile Home	8
Laurent Mobile Home Park	Hwy 98, Mary Esther	Mobile Home	30
Le To Nice Village	315 Racetrack Rd, FWB	Mobile Home	103
Lindy's Trailer Park	2300 W Hwy 98, Mary Esthr	Mobile Home	24
Log Lake Road RV Park	Hwy 189, Holt	R.V. Park/Camp	36
Martin's Trailer Park	207G Pelham Rd, FWB	Mobile Home	8
Mcfarling Trailer Park	116-117 Bradford St, FWB	Mobile Home	29
Mini Manor	114 Skipper Ave, FWB	Mobile Home	6
Miracle Mobile Home Parks	27 Miracle Dr, Mary Esther	Mobile Home	45

OKALOOSA COUNTY MOBILE HOME AND RV PARKS (con't)

Park Name	Address	Park type	Spaces
Moore's Trailer Park	2 9th Ave, Shalimar	Mobile Home	28
Niceville Trailer Court	615 Bullock St, Niceville	Mobile Home	9
North Star Trailer Park	564 E. Pine St, Mary Esther	Mobile Home	6
Oakdale Village Mob. Hm Pk	820 Hazel Dr, FWB	Mobile Home	74
Oakland Trailer Park	23 Yacht Club Dr, FWB	Mobile Home	29
Palm Trailer Park	1015 N Partin Dr, Niceville	Mobile Home	9
Parker's Park	821 Cardinal Dr, FWB	Mobile Home	10
Patty's Trailer Park	781 Navy St, FWB	Mobile Home	6
Paulette's Trailer Court	98 Hurlburt Rd, FWB	Mobile Home	11
Pinecrest Trailer Park	441 Racetrack Rd, FWB	Mobile Home	65
Pineoaks Trailer Park	622 Gap Creek Dr, FWB	Mobile Home	18
Pineview Trailer Park	44 Kathleen St, Mary Esther	Mobile Home	6
Plantation Trailer Park	816 Tanager Dr, FWB	Mobile Home	26
Playground Mobile Hm Pk	Hazel & Jonleen, FWB	Mobile Home	26
Playground Trailer Court	777 Beal Pky, FWB	R.V. Park/Camp	30
Playground Trailer Court	777 Beal Pky, FWB	Mobile Home	35
Ponderosa Trailer Park	1513 W Ponderosa Rd, FWB	Mobile Home	8
Preble's Trailer Court	724 Lloyd St, FWB	Mobile Home	8
Prieto's Trailer Park	18th St, Niceville	Mobile Home	6
Prince Trailer Park	124 Patrick Dr, FWB	Mobile Home	14
Quality Trailer Park	132 Hurlburt Rd, FWB	Mobile Home	19
Richards Trailer Park	1507 Hickory, Niceville	Mobile Home	6
River's Edge RV Camp	End of Log Lake Rd, Holt	R.V. Park/Camp	39
Roberts Trailer Park	1641 E Hwy 90, Crestview	R.V. Park/Camp	4
Roberts Trailer Park	1641 E Hwy 90, Crestview	Mobile Home	19
Rockin'W Trailer Park	800 Cardinal Dr, FWB	Mobile Home	14
Rodriquez Trailer Park	70 Cactus Rd, Mary Esther	Mobile Home	6
Rosemont Mobile Park	114 Redwood, Niceville	Mobile Home	48
Roses Trailer Park	3389 Hwy 98 W, Mary Esther	Mobile Home	17
Ruzoski Trailer Park	134 Fetting Ave, FWB	Mobile Home	6
Ryals Trailer Park	800-802 Lark St, FWB	Mobile Home	13
Sanders Trailer Park	703 Shady Lane, FWB	Mobile Home	7
Sarah's Mobile Home Park	818 Navy St, FWB	Mobile Home	7
Shady Haven Mob Hm Pk	830 Tanager Dr, FWB	Mobile Home	8
Shady Lane Trailer Park	118 Koon St, FWB	Mobile Home	6
Shirah Mobile Home Park	827 Cross St, Destin	Mobile Home	9
Simpler's Trailer Park	1303 Green Acres Ave, FWB	Mobile Home	7
Sir Roberts Trailer Park	1302 Green Acres Rd, FWB	Mobile Home	18
Smith's Mobile Home Park	700 Viola Dr, FWB	Mobile Home	8

OKALOOSA COUNTY MOBILE HOME AND RV PARKS (con't)

Park Name	Address	Park type	Spaces
Southern Trailer Park	106 Racetrack Rd, FWB	Mobile Home	20
Southside Mobile Home Pk	Duggan & Johnson, Crestvw	Mobile Home	28
Sundial Mobile Home Park	5300 S Ferdon, Crestview	Mobile Home	31
Taunton Trailer Park	105 Hardin Rd, Niceville	Mobile Home	6
Tennis Rentals	16-21 Ranger Rd, Mary Esthr	Mobile Home	18
The Habitat Trailer Park	155 Rickey St, FWB	Mobile Home	6
Thomas Trailer Park	701 Leonard Dr, FWB	Mobile Home	10
Tisa Trailer Park	101 Sasser St, Niceville	Mobile Home	6
Trailer Village Mobl Hm Pk	720 N Beal, FWB	Mobile Home	50
Twin Oaks Trailer Park	1700 Lewis turner, FWB	Mobile Home	9
Tyner Court	700 Tyner St, FWB	Mobile Home	16
Vache Royale	800 Denton Blvd, FWB	Mobile Home	8
Vila Breeze Park	517 Scott Ln, FWB	Mobile Home	6
Villa Socin Mobile Homes	928 Carlos Dr, FWB	Mobile Home	134
Villa Trailer Park	100 Hurlburt Rd, FWB	Mobile Home	17
Villa Winds	678 Denton Blvd, FWB	Mobile Home	12
Walton's Trailer Park	711 Navy St, FWB	Mobile Home	6
Ward's Mobile Home Park	1502 Ponderosa, FWB	Mobile Home	15
Warrens Trailer Park	Ft. Walton Beach	Mobile Home	8
Whispering Pines Trailer Pk	665 Denton Blvd, FWB	Mobile Home	10
Williams Court	Jonleen St, FWB	Mobile Home	25
Williams Trailer Park	85 Ebenezer, Laurel Hill	Mobile Home	19
Willow Winds Mob Hm Pk	Ray Vecchio Rd, Mary Esthr	Mobile Home	6
Woodland Acres Trlr Park	1825 Lewis Turner, FWB	Mobile Home	24
Wright Circle Mobile Park	703 Carmel Dr, FWB	Mobile Home	8
Wright Trailer Court	150 Barks Dr, FWB	Mobile Home	15
Zupco Mobile Home Court	226-232 Oakhill, FWB	Mobile Home	6
TOTAL			2843

WALTON COUNTY MOBILE HOME AND R.V. PARKS

Park Name	Address	Park type	Spaces
Bass Haven Campground	350 Bass Haven dr	R.V. Park/Camp	14
Topsail RV Resort	US 98 and County Rd 30A	R.V. Park/Camp	168
Seagrove Beach Campgrounds	County Road 30A	R.V. Park/Camp	52
Inlet Beach Campground	US 98 just west of Bay Co.	R.V. Park/Camp	25
Gulf Hills Campground	West of Grayton Beach	R.V. Park/Camp	25
Holiday Travel Park	E.of Destin off US 98 S. side	R.V. Park/Camp	88
Basin Bayou Trailer Park	7329 St Hwy 20 West	Mobile Home	8

BAY COUNTY MOBILE HOME AND R.V. PARKS

Park Name	Address	Park type	Spaces
Abbott Rentals	5824 Cherry Street	Mobile Home	5
Al Harlen Rentals	2521 Michigan Avenue	Mobile Home	125
Al Harlen Rentals	2514 Drummond Avenue	Mobile Home	8
Anderson's Trailer Park	5102 East 12th Street	Mobile Home	22
Azalea Coach Estates	611 West 14th Street	Mobile Home	10
Barnes Trailer Park	1537 James Avenue	Mobile Home	16
Bayside Mobile Home Park	6325 Big Daddy Drive	Mobile Home	192
Bayside Mobile Home Park	6325 Big Daddy Drive	R.V. Park/Camp	4
Bayview Mobile Home Park	2503 Drummond Avenue	Mobile Home	8
Big Gator Trailer Park (East)	3200 Highway 98	Mobile Home	13
Blue Bay Motor Lodge	3407 West Highway 98	Mobile Home	10
Breckenwood M.H.P.	4513 Pipeline Road	Mobile Home	5
Buena Vista Mobile Home Park	1320 Buena Vista Blvd	Mobile Home	82
Busy Bee	120 Eleanor Street	Mobile Home	12
By The Bay Mobile Home Park	1038 South Berthe Avenue	Mobile Home	15
C & B Mobile Home Park	5276 Stewart Drive	Mobile Home	5
Capt's Quarters Mobile Estates	8919 North Lagoon Drive	Mobile Home	18
Cedar Grove Adult M.H.P	1834 East Avenue	Mobile Home	64
Cerbns Mobile Home Parks	2615 Allison Avenue	Mobile Home	8
Chasewood Park	2200 Laurie Avenue	Mobile Home	22
Coatney's Trailer Park	5101 Whitaker Street	Mobile Home	6
Cooper Drive Trailer Court	27 W. Cooper Drive	Mobile Home	9
Country Pines Estates I	300 East 25th Street	Mobile Home	30
Country Pines Estates II	3120 Minnesota Avenue	Mobile Home	70
Countryside Prop. of N.W. Fl	3226 Douglas Road	Mobile Home	10
Daves Mobile Home Park	1329 Transmitter Road	Mobile Home	8
Dottie's Place	19406 Plaza Avenue	R.V. Park/Camp	6
Duvall Trailer Park	325 Paradisio Place	Mobile Home	10
Eden RV Park	1957 Allison Avenue	Mobile Home	3
Eden RV Park	1957 Allison Avenue	R.V. Park/Camp	27
Edna's Trailer Park	821 Transmitter Road	Mobile Home	7
Flamingo Park	2607 Grant Avenue	Mobile Home	10
Fort Apache	910 Alabama Avenue	Mobile Home	8
Gulf Pines RV Park	8507 Gulf Pines	Mobile Home	6
Hertiage Rv Park	15000 Front Beach Road	R.V. Park/Camp	16
Isle of View Mobile Home Park	518 Everitt Avenue	Mobile Home	55
Ja Ma Lo RV Park	8812 Resota Beach Road	Mobile Home	38
Jack Bright Mobile Home Park	8404 Gulf Pines Drive	Mobile Home	34
Jerry Pybus Rentals	11005 Old Bicycle Road	Mobile Home	12
Johnson Mobile Home Park #2	2356 Douglas Road	Mobile Home	10
Johnson Mobile Home Park #3	2333 Douglas Road	Mobile Home	10
Johnson Mobile Home Park #6	2517 North Bonita	Mobile Home	8
Legear Mobile Home Park	2336 Legear Lane	Mobile Home	40
Legear Mobile Home Park	2336 Legear Lane	R.V. Park/Camp	2
Lisenby Ave. Mobile Home Park	2915 Lisenby Av	Mobile Home	38
Luvena(Southport)Miller M.H.P.	6001 Highway 231	Mobile Home	17

BAY COUNTY MOBILE HOME AND R.V. PARKS (con't)

Park Name	Address	Park type	Spaces
Magnolia Beach Campground	7800 Magnolia Beach Road	R.V. Park/Camp	96
Matincheck Mobile Home Park	1032 W 15th Street	Mobile Home	11
Mayo's Mobile Home Park	166 Sims Avenuue	Mobile Home	7
McEachin's Rentals	3027 Douglas Road	Mobile Home	11
Mceachins Rentals II	3307 East Baldwin Road	Mobile Home	17
Millville Trailer Park	400 East Avenue	Mobile Home	15
Miracle Strip Rv Resort	10510 Front Beach Road	Mobile Home	51
Miracle Strip Rv Resort	10510 Front Beach Road	R.V. Park/Camp	32
Mobile Home Villa	208 North Hwy 22A	Mobile Home	10
Moore's Trailer Park	1026 E 24th Plaza	Mobile Home	10
Mylisa Road Mobile Home Park	1636 Mylisa Road	Mobile Home	8
Nautical Point	317 Blackshear Drive	Mobile Home	6
Nautical Point	317 Blackshear Drive	R.V. Park/Camp	18
Oaks, The	443 North Star Avenue	Mobile Home	14
Ocean Park RV Resort	23026 Back Beach Road	Mobile Home	143
Palm Circle Mobile Home Park	2510 West 18th Street	Mobile Home	19
Panama City Beach Koa/Campers	8800 Thomas Drive	Mobile Home	75
Panama City Beach Koa/Campers	8800 Thomas Drive	R.V. Park/Camp	114
Panama City Mobile Home Estate	700 Transmitter Road	Mobile Home	125
Panama Cty Bch Campground/RV	1260 W. Beach Drive	R.V. Park/Camp	200
Park Place	9322 Front Beaach Road	R.V. Park/Camp	48
Peaden Mobile Home Park	2741 Carol Lane	Mobile Home	8
Pecan Grove Mobile Home Park	5424 Boatrace Road	Mobile Home	10
Pierce Trailer Rental	5118 Harvey Avenue	Mobile Home	6
Pines Mobile Home Park	250 Nelle Avenue	Mobile Home	32
Pitts Trailer Park	5114 N Star Avenue	Mobile Home	20
Ponderosa Mobile Home Park	1117 South Tyndall Parkway	Mobile Home	32
Port Lagoon Yacht Basin	5201 North Lagoon Drive	Mobile Home	10
Ralph Diaz Rental #2	5123 East Fourth Street	Mobile Home	6
Ralphs Rentals	1305 E Transmitter Rd.	Mobile Home	14
Riley Spell Mobile Home Park	8001 Santa Rosa	R.V. Park/Camp	7
Robinson's Trailer Park	6600 E Oakshore Drive	Mobile Home	8
Russell O Voyles & Co Rovac	4113 Voyles Road	Mobile Home	9
Rustic Sands Resort Campground	800 W. 15th Street	Mobile Home	16
Rustic Sands Resort Campground	800 W. 15th Street	R.V. Park/Camp	32
Sappy Lane Trailer Park	5100 E 7th Street	Mobile Home	11
Sappy Lane Trailer Park	5100 E 7th Street	R.V. Park/Camp	20
Sea Gull Trailer Park	14700 Front Beach Rd	Mobile Home	137
Senior Citizen's Park	2201 Dorothy Avenue	Mobile Home	6
Southern Oaks Drive M.H.P.	2510 West 18th Street	Mobile Home	14
Southport (Millers) Trailer Pk	7505 Talmadge	Mobile Home	8
Spring Mobile Home Park	1709 Chaucer Lane	Mobile Home	56
St Andrew Mobile Home Court	1400 Beck Avenue	Mobile Home	16
St. Andrew Mobile Home Park	1236 Beck Avenue	Mobile Home	10
St. Andrews State Recreation A	4415 Thomas Drive	Mobile Home	176
Sunshine Villa	409 Airport Road	Mobile Home	15
Swan Villa	6401 Oakshore Drive	Mobile Home	6
Tharp's Camp Cedar	4370 Huckleberry Lane	Mobile Home	8

BAY COUNTY MOBILE HOME AND R.V. PARKS (con't)

Park Name	Address	Park type	Spaces
Timberlane	5115 E 14th Street	Mobile Home	19
Timberwood Estates I	1701 Tennessee Avenue	Mobile Home	10
Venture Out At Pcb	4345 Thomas Drive	Mobile Home	39
Waller Mobile Home Park	1016 N. Hwy 22A	Mobile Home	11
Walsh's Mobile Home Park	1800 East Avenue	Mobile Home	23
Adams Mobile Home Park	5116 Thornton Lane	Mobile Home	16
Allmaras Mobile Home Park	2412 Laurie Avenue	Mobile Home	16
Ammie's Mobile Home Park	2300 Sherman Avenue	Mobile Home	80
Anchorage Mobile Home Park	4200 West 19th Street	Mobile Home	32
Anchorage Mobile Home Park	4200 West 19th Street	R.V. Park/Camp	3
Ash Land Mobile Home Park	2507 Drummond Avenue	Mobile Home	12
Austin Mobile Home Park	9502 Clarance Street	Mobile Home	18
Austin Mobile Home Park	9502 Clarance Street	R.V. Park/Camp	2
Barrentine Trailer Park	2711 Ormond Avenue	Mobile Home	10
Barrentine Trailer Park	2711 Ormond Avenue	R.V. Park/Camp	1
Bay Oaks M.H.P.	1024 Pitts Avenue	Mobile Home	18
Bayview Mobile Home Park	920 East Park	Mobile Home	20
Blair Mobile Home Park	1510 Gainer Avenue	R.V. Park/Camp	20
Brocks Mobile Home Park	1212 Ethlyn Road	Mobile Home	6
Carriage Way	6000 Harvey Street	Mobile Home	10
Carriage Way	6000 Harvey Street	R.V. Park/Camp	2
Cherry Lane	6600 Cherry Street	Mobile Home	10
Circle J Trailer Park	607 West 11th Street	Mobile Home	61
Country Side Estates	1128 South Gay Avenue	Mobile Home	150
Florida Pines M.H.P.	3500 Florida Avenue	Mobile Home	15
George Martin Mobile Home Park	3424 East 15th Street	Mobile Home	15
Gulf Breeze Mobile Home Park	1532 June Avenue	Mobile Home	24
J.J. Trailer Park	2408 Dorothy Avenue	Mobile Home	9
Johnson Mobile Home Park #1	2326 Canal Avenue	Mobile Home	10
Johnson Mobile Home Park #4	1009 East 24th Plaza	Mobile Home	5
Johnson Mobile Home Park #5	1109 East 24th Plaza	Mobile Home	8
Kingswood Mobile Home Park	9219 Kingwoods Road	Mobile Home	11
L & M Mobile Home Park	1012 East 24th Plaza	Mobile Home	7
Landever Mobile Home Park	420 North Kimbrel Avenue	Mobile Home	34
Lynn Haven Mobile Home Park	201 West 14th Street	Mobile Home	48
Melody Lane	4926 East 2nd Street	Mobile Home	10
Mobile Home Gardens	238 Tyndall Parkway	Mobile Home	23
North Bay Mobile Home Living	4512 Carla Lane	Mobile Home	7
Sherman Pines Mobile Home Park	1940 Sherman Avenue	Mobile Home	93
Sunset Mobile Home Park	2515 Laurie Avenue	Mobile Home	7
Taylor Mobile Home Park	4905 Alameda Street	Mobile Home	7
Waldrop's Mobile Home Park	5000 West 18th Street	Mobile Home	10

HOLMES COUNTY MOBILE HOME AND R.V. PARKS

Park Name	Address	Park type	Spaces
Benny Hall Mobile Home Park	Rt 1 Box 277	Mobile Home	7
Dancy's Campground	Rt 1 Box 326	Mobile Home	4
Dancy's Campground	Rt 1 Box 326	R.V. Park/Camp	10
Holmes Corr. Housing	P.O. Box 190	Mobile Home	9
Jadermelmar Mobile Home Park	103 Raley Dr	Mobile Home	5
Larry's Shady Oak Trailer Park	Po Box 1182	Mobile Home	8
Palm Winds Trailer Park	901 N Hamlin St	Mobile Home	21
Ralph Crowder Mobile Home Park	P.O. Box 936	Mobile Home	8
Rolling Hills	508 Edison St	Mobile Home	22
Stewart's Mobile Home Park	Rt 4 Box 24	Mobile Home	6
Stewart's Mobile Home Park	Rt 4 Box 24	R.V. Park/Camp	4
Vortex Springs, Inc	Rt 2 Box 650	Mobile Home	2
Vortex Springs, Inc	Rt 2 Box 650	R.V. Park/Camp	15
TOTAL			121

WASHINGTON COUNTY MOBILE HOME AND R.V. PARKS

Park Name	Address	Park type	Spaces
Belmar Trailer Park	301 Highway 277 S, Chipley	Mobile Home	10
Broxton's Park	Rt. 1 South Caryville (River Rd)	R.V. Park	7
Camillia Circle Trailer Park	St. Mary Rd Rt. 1, Caryville	Mobile Home	13
Camp Dewey Paul	Sr 79 - 3 Miles N Cypress Spr.	R.V. Park/Camp	10
Chipley Mobile Home Park	231 S 1st Street, Chipley	Mobile Home	16
Circle J Trailer Park	915 N 2nd Street, Chipley	Mobile Home	27
Deal's Trailer Park	Hwy #77a, Chipley	Mobile Home	15
Doyle Taylor Mobile Home Park	213 Hwy 277, Chipley	Mobile Home	8
Falling Waters State Rec.	Rt. 5 Box 660, Chipley	R.V. Park/Camp	24
Fish Rentals	Rt. 2 Box 250, Chipley	Mobile Home	8
G & J Trailer Park	Rt. 7 Box 266, Chipley	Mobile Home	8
Gordy Trailer Park	Rt. 7 Box 244, Chipley	Mobile Home	11
Holmes Creek	P.O. Box 354, Vernon	Mobile Home	8
Joiner's Mobile Home Park	Griffin Road, Chipley	Mobile Home	12
Joiner's Trailer Park	Rt. 5 Box 828, Chipley	Mobile Home	12
Kimberly Sesser #2	Pats Nursery Road, Chipley	Mobile Home	5
Kimberly Sesser #1	Pats Nursery Road, Chipley	Mobile Home	5
McNeill Trailer Park	609 N 4th Street, Chipley	Mobile Home	17
McNeill's Trailer Park	809 N 8th Street, Chipley	Mobile Home	40
McNeill's Trailer Park	809 N 8th Street, Chipley	R.V. Park/Camp	6
Nicholas Trailer Park	1005 South 8th Street, Chipley	Mobile Home	6
Northside Trailer Park	1004 North 2nd Street, Chipley	Mobile Home	13
Northwest FL Campground/Park	Rt. 5 Box 830 (Griffin Road)	Mobile Home	6
Northwest FL Campground/Park	Rt. 5 Box 830 (Griffin Road)	R.V. Park/Camp	45
Paradise Lost Resort	Star Route Box 325, Vernon	R.V. Park/Camp	98
Pine Hurst Mobile Village	217 Candy Lane, Chipley	Mobile Home	9
Pine Log St. Forest Campground	Pine Log St. ,Ebro	R.V. Park/Camp	20
Sesser Trailer Park	209 Brown Street, Chipley	Mobile Home	9
Trawick	209 Bell Road, Chipley	Mobile Home	10
Vorika's	Rt. 5 Hwy 90 W, Chipley	Mobile Home	11
Westside Mobile Home Park	Hwy 90 West, Chipley	Mobile Home	7
Yohn's Trailer Park	Ed Martin Rd, Bonifay	Mobile Home	10
TOTAL			506

MARINAS AND BOAT STORAGE

The location and capacity of existing Marinas and boat storage facilities is also critical because many boat owners will attempt to move their boat to safety. This is particularly true if the boat can be loaded on a trailer. Emergency managers must consider the magnitude of these efforts and plan for possible impacts to evacuation routes and evacuation times. The marina facilities should also estimate the number of users planning to obtain their boats and the time it will take to retrieve and load the boats and secure their facilities. They should plan to complete this effort prior to the arrival of gale force winds. A list of these facilities for each county is shown below.

ESCAMBIA COUNTY MARINAS

MARINA NAME	ADDRESS	# OF SPACES
Brown Marine Serve	40 Audusson Ave	90
Bayou Chico Marina	806 Lakewood rd	97
Day Break Marina	811 S. "R" St.	252
Harborview Marina	1220 Mahogany Mill	235
Mac's Marina	2 Marietta Ave	150
Mahogany Landing	1200 Mahogany Mill	50
Palafox Pier	S. Palafox St.	90
Bahia Mar	W. Cypress St.	150
The Moorings	Pensacola Beach	24
Seville Harbor	600 S. Barracks St.	100
Pensacola Shipyard	700 S. Myrick St.	61
Pens. Bch. Yacht Club	715 Pens. Bch. Blvd	30
Perdido Key Marina	13700 River rd	30
Rod and Reel Marina	10045 Sinton Drive	100
Southwind Marina	10121 Sinton Drive	150
Lafitte Cove Marina	1010 Ft. Pickens rd	20
Sabine Yacht Club	Pensacola Beach	20
Pensacola Yacht Club	S. "M" St.	25
Nautical Steam Shack	Barrancas Ave	50
The Swamphouse	E. Nine Mile rd	100
Smith's Fish Camp	E. Nine Mile rd	75
Grand Lagoon Yacht	Gulf Beach Hwy	50
Bell Marine	Audusson Ave	20

SANTA ROSA COUNTY MARINAS

MARINA NAME	ADDRESS	# OF SPACES
Pier 1	49 Gulf Breeze Pkwy	27

OKALOOSA COUNTY MARINAS

MARINA NAME	ADDRESS	# OF SPACES
Bluewater Bay Marina	300 Yacht Club Dr., Niceville	120 slips
Boat, The	32 SW Miracle Strip Pky, FWB	130 slips
Captain Daves	314 E Hwy 98, Destin	16 slips
D & J Dry Storage	11 Calhoun Avenue, Destin	
Deckhands Marina	1352 Miracle Strip Pky, FWB	94 slips, 12 dry dock
Destin Dry Storage & Marina	116 E Hwy 98. Destin	167 dry storage, 5 slips
Destin Fisherman Co-OP	210 E Hwy 98. Destin	
East Pass Marina	288 E Hwy 98. Destin	35 slips, 10 dry storage
FWB Yacht Basin	104 SW Miracle Strip, FWB	
Giuseppi's Wharf Restaurant	821 Bayshore Dr, Niceville	50 slips
Harborwalk Marina	346 Mountain Dr, Destin	
Lighthouse Key	115 John Sims Pky, Niceville	48 slips, 84 dry storage
Marina Cafe	404 E Hwy 98, Destin	25 slips
Marina Motel	1345 Miracle Strip, FWB	27 slips
Shalimar Yacht Basin	100 Old Ferry Rd	100 slips
Sides Marine Dry Storage	7 Calhoun Ave, Destin	

WALTON COUNTY

There are no marinas designed for storage of large boats in this county, but historically, charter boats and other large craft, have found shelter in deep water areas of tributaries along the north shore of Choctawhatchee Bay and in the lower Choctawhatchee River Basin.

BAY COUNTY

The county is currently compiling this data and will include it in this report in the future.

HOLMES COUNTY

There are no marinas in Holmes County.

WASHINGTON COUNTY

There are no marinas in Washington County.

SPECIAL CONSIDERATIONS AND STRATEGIES

ESCAMBIA COUNTY

No special considerations or strategies provided by the county.

SANTA ROSA COUNTY

No special considerations or strategies provided by the county.

OKALOOSA COUNTY

Evacuation and sheltering strategies in Okaloosa County include, advertising the "Run from the water, hide from the wind" motto to reduce unnecessary evacuations. Encouraging a "Hosting" Program where civic groups, businesses, and churches promote internal sheltering -- people who live in surge zones can stay with people who live outside the surge zone.

WALTON COUNTY

A main concern in Walton County is the long clearance times for south Walton County when they experience a high tourist occupancy. The County feels that their evacuation announcements will not be communicated effectively with this vacationing public and they will not evacuate as quickly as they should. Walton County trys to evacuate early and stress to the public that public shelters are a last resort only. They have had very few people in their shelters, historically.

BAY COUNTY

No special considerations or strategies provided by the county.

HOLMES COUNTY

No special considerations or strategies provided by the county.

WASHINGTON COUNTY

No special considerations or strategies provided by the county.

CRITICAL FACILITIES TABLES

Tables 3-3 through 3-10, list the critical facilities compiled by each County. The table shows the facility name, facility address, the city it is located in, the emergency function it performs and what hurricane category storm surge it is in. If the facility shows a "0" for the Hurricane Category ("Cat." column), it is not located in one of the 5 hurricane surge areas. The table also shows a column for the National Flood Insurance Program (NFIP) Flood Zone that the facility is in. The latitudes and longitudes for critical facilities are included in the digital data provided on Compact Disc in ArcExplorer GIS projects, if the Lat/Longs were provided by the Counties. Note the CAT. and NFIP columns were populated using the Lat/Longs provided by the counties and a GIS query using ArcView. If any of the zone designations are questionable the coordinates should be checked and a field verification should be made.

Table 3-3 Escambia County Critical Facilities

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
1	Pensacola Post Office (Main Branch)	1400 W. Jordan St	Pensacola	850-434-9101	Delivery/receipt Mail	Dry	C
2	County Correctional Facility	2935 North "L" St	Pensacola	850-436-9825	Correctional Facility	Dry	C
3	Escambia County Area Transit	1515 W. Fairfield Dr	Pensacola	850-436-9383	Transportation	Dry	C
4	Brent Fire Department	5925 N. "W" St	Pensacola	850-436-9601	Fire Department	Dry	C
5	Pensacola Fire Department - Station 7	2430 Airport Blvd	Pensacola	850-435-1711	Fire Department	Dry	C
6	Pensacola Fire Department - Station 6	6550 North 9th Ave	Pensacola	850-435-1711	Fire Department	Dry	C
7	Pensacola Fire Department - Station 5	700 North 9th Ave	Pensacola	850-435-1711	Fire Department	Dry	C
8	Pensacola Fire Department - Station 4	1 North "Q" St	Pensacola	850-435-1711	Fire Department	Dry	C
9	Pensacola Fire Department - Station 3	2750 Summit Blvd	Pensacola	850-435-1711	Fire Department	Dry	C
10	Pensacola Fire Department - Station 2	4402 N. Davis Hwy	Pensacola	850-435-1711	Fire Department	Dry	C
11	Pensacola Fire Department - Station 1	239 North Spring St	Pensacola	850-435-1711	Fire Department	Dry	C
12	Pensacola Police Department	711 North Hayne St	Pensacola	850-435-1855	Police Station	Dry	C
13	Pensacola City Hall	180 Governmental Center	Pensacola	850-435-1770	Information and Coordination	2	C
14	Pensacola Regional Airport	2430 Airport Blvd	Pensacola	850-435-1746	Delivery/receipt Mail	Dry	C
15	County Courthouse Annex	7500 N. Century Blvd	Century	850-595-3190	Police Department	Dry	C
16	County Courthouse	223 Palafox Place	Pensacola	850-595-3190	Information and Coordination	3	C
17	County Road Operations Maintenance Fac.	601 Highway 297a	Cantonment	850-968-9502	Road Operations & Maintenance	Dry	C
18	County Road Prison	601 Highway 297a	Cantonment	850-968-3723	Correctional Facility	Dry	C
19	County Road Operations Building	601 Highway 297a	Cantonment	850-968-9502	Miscellaneous	Dry	C
20	Pensacola Beach Wastewater Plant	Via Deluna Dr	Pensacola Bch	850-438-8448	Sewage Treatment	1	C
21	Main Street Wastewater Treatment Plant	401 W. Government St	Pensacola	850-438-8448	Sewage Treatment	3	C

Table 3-3 Escambia County Critical Facilities (con't)

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
22	Cantonment Wastewater Treatment Plant	601 Highway 297a	Cantonment	850-438-8448	Sewage Treatment	Dry	C
23	Avondale Wastewater Treatment Plant	Fayal Drive	Pensacola	850-438-8448	Sewage Treatment	4	A
24	Ensley Fire Department	8634 Pensacola Blvd	Pensacola	850-476-9662	Fire Department	Dry	C
25	Sacred Heart Hospital	5151 North 9th Ave	Pensacola	850-474-7167	Hospital/major Medical	Dry	C
26	Emergency Operations Center/sheriff Ofc	2920 North "L" St	Pensacola	850-595-3311	Eoc/law Enforcement	Dry	C
27	Langley Bell 4-h Camp	4812 West Nine Mile Road	Cantonment	850-475-5230	Shelter - Backup/secondary	Dry	C
28	Florida Highway Patrol Headquarters	150 Stumpfield Rd	Pensacola	850-484-5000	Florida Highway Patrol	Dry	C
29	Wcoa Radio	6565 North "W" St	Pensacola	850-478-6011	Information and Coordination	Dry	C
30	Woodham High School	150 E. Burgess Rd	Pensacola	850-478-4020	Shelter - Primary	Dry	C
31	Pleasant Grove Fire Department	9350 Gulf Beach Highway	Pensacola	850-492-3652	Fire Department	Dry	AE
32	Cantonment Fire Department	2 Woodland Ave	Cantonment	850-968-5011	Fire Department	Dry	C
33	Beulah Fire Department	6400 W. Nine Mile Rd	Pensacola	850-944-3167	Fire Department	Dry	C
34	County Leonard Street Office Complex	1190 W. Leonard St	Pensacola	850-595-3190	Information and Coordination	Dry	C
35	Pensacola Civic Center	201 E. Gregory St	Pensacola	850-432-0800	Miscellaneous	Dry	C
36	Health Department - Main Office	1295 W. Fairfield Dr	Pensacola	850-595-6622	Clinic	Dry	C
37	Bellview Fire Department	4701 Maywood Ave	Pensacola	850-944-0130	Fire Department	Dry	C
38	Mcdavid Fire Department	100 N. Century Blvd	Mcdavid	850-256-5278	Fire Department	Dry	C
39	Myrtle Grove Fire Department	7209 Lillian Highway	Pensacola	850-455-5411	Fire Department	Dry	C
40	Peoples Water Service Company (Office)	905 Lownde Ave	Pensacola	850-455-8552	Water Treatment	5	C
41	Peoples Water Service Company (Well #3)	30 Mindoro Circle	Pensacola	850-455-8552	Water Treatment	Dry	C
42	Peoples Water Service Company (Well #4)	5 Fleet Road	Pensacola	850-455-8552	Water Treatment	Dry	C
43	Peoples Water Service Company (Well #5)	498 S. Old Corry Road	Pensacola	850-455-8552	Water Treatment	2	C
44	Peoples Water Service Company (Well #8)	Navy Blvd and Ehrmann St	Pensacola	850-455-8552	Water Treatment	Dry	C

Table 3-3 Escambia County Critical Facilities (con't)

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
45	Peoples Water Service Company (Well #9)	Brandon Ave and Delray St	Pensacola	850-455-8552	Water Treatment	Dry	C
46	Warrington Fire Department	20 N. Navy Blvd	Pensacola	904-457-6297	Fire Department	Dry	C
47	Beulah Elementary School	6201 Helms Road	Pensacola	850-469-6163	Shelter - Primary	Dry	C
48	Bellview Elementary School	4425 Bellview Ave	Pensacola	850-469-6163	Shelter - Primary	Dry	C
49	Pine Meadow Elementary School	10001 Omar Ave	Pensacola	850-469-6163	Shelter - Primary	Dry	C
50	Wedgewood Middle School	3420 Pinestead Road	Pensacola	850-469-6163	Shelter - Primary	Dry	C
51	Washington High School	6000 College Blvd	Pensacola	850-469-6163	Shelter - Primary	Dry	C
52	Ferry Pass Fire Dept	2331 E. Johnson Ave	Pensacola	850-476-9458	Fire Department	Dry	C
53	Sheriff's Office Molino Sub-station	5844 N. Highway 29	Molino	850-436-9225	Police Department	Dry	C
54	Sheriff's Office Ensley Sub-station	97 W. Hood Dr	Pensacola	850-436-9225	Police Station	Dry	C
55	Health Department - Century Annex	501 Church St	Century	850-595-6622	Clinic	Dry	C
56	Fire Administration/community Services	150 W. Maxwell St	Pensacola	850-595-3125	Fire Department	Dry	C
57	Health Department - Molino Annex	3470 N. Highway 29	Cantonment	850-595-6620	Clinic	Dry	C
58	Commodities Warehouse	520 S. Commendencia St	Pensacola	850-595-3190	Miscellaneous	2	C
59	Matt Langley Bell Iii Office Building	213 Palafox Place	Pensacola	850-595-3190	Information and Coordination	3	C
60	Agriculture Extension Service	3740 Stefani Road	Cantonment	850-475-5230	Information and Coordination	Dry	C
61	Pensacola Beach Fire Department	901 via Deluna Dr	Pensacola Bch	850-932-3131	Fire Department	3	C
62	Century City Hall	7995 N. Century Blvd	Century	850-256-3208	Miscellaneous	Dry	C
63	West Pensacola Fire Department	1700 N. "W" St	Pensacola	850-432-7100	Fire Department	Dry	C
64	Walnut Hill Fire Department	7760 Highway 97	Walnut Hill	850-327-4431	Fire Department	Dry	C
65	Century Fire Department	10 Tedder Rd	Century	850-256-4592	Fire Department	Dry	C
66	Molino Fire Department	6200 Molino Rd	Molino	850-587-2661	Fire Department	Dry	C
67	Innerarity Point Fire Department	14250 Innerarity Rd	Pensacola	850-492-0544	Fire Department	3	C

Table 3-3 Escambia County Critical Facilities (con't)

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
68	Emergency Medical Services Admin	2257 N. Baylen St	Pensacola	850-595-3160	Emergency Medical Services	Dry	C
69	Lipscomb Elementary School	10200 Ashton Broshaham Rd	Pensacola	850-469-6163	Shelter - Primary	Dry	C
70	Ransom Middle School	1000 W. Kingsfield Rd	Cantonment	850-469-6163	Shelter - Primary	Dry	C
71	Bellview Middle School	6201 Mobile Hwy	Pensacola	850-469-6163	Shelter - Primary	Dry	C
72	Brownsville Middle School	3700 W. Avery St	Pensacola	850-469-6163	Shelter - Primary	Dry	C
73	Ferry Pass Middle School	8355 Yancey Ave	Pensacola	850-469-6163	Shelter - Primary	Dry	C
74	Scenic Heights Elementary	3801 Cherry Laurel Drive	Pensacola	850-469-6163	Shelter - Primary	Dry	C
75	Sherwood Elementary School	501 Cherokee Trail	Pensacola	850-469-6163	Shelter - Primary	Dry	C
76	Ernest Ward Middle School	7650 Highway 97	Walnut Hill	850-469-6163	Shelter - Primary	Dry	C
77	Workman Middle School	6266 Lanier Dr	Pensacola	850-469-6163	Shelter - Primary	Dry	C
78	Jim Bailey Middle School	4110 Bauer Rd	Pensacola	850-469-6163	Shelter - Primary	Dry	C
79	Helen Caro Elementary School	12551 Meadson Rd	Pensacola	850-469-6163	Shelter - Primary	5	C
80	Brentwood Middle School	201 Hancock Ln	Pensacola	850-469-6163	Shelter - Primary	Dry	C
81	Northview High School	4100 W. Highway 4	Century	850-469-6163	Shelter - Primary	Dry	C
82	Carver Middle School	700 E. Hecker Rd	Century	850-469-6163	Shelter - Primary	Dry	C
83	Jim Allen Elementary School	1051 N. Highway 95a	Cantoment	850-469-6163	Shelter - Primary	Dry	C
84	Warrington Middle School	450 S. Old Corry Rd	Pensacola	850-469-6163	Shelter - Primary	Dry	C
85	Olive Baptist Church	1836 E. Olive Rd	Pensacola	850-476-1932	Shelter - Special Needs	Dry	C
86	Sheriff's Office Big Lagoon Sub-station	12950 Gulf Beach Hwy	Pensacola	850-436-9225	Sheriff Department	5	C
87	Baptist Hospital	1000 W Moreno St	Pensacola	850-434-4555	Hospital/major Medical	Dry	C
88	West Florida Regional Medical Center	8383 N Davis Hwy	Pensacola	850-494-4000	Hospital/major Medical	Dry	C
89	West Florida Medical Center Clinic	8333 N Davis Hwy	Pensacola	850-474-8000	Clinic	Dry	C
90	Peoples Crystal Ice Company	1511 W Government St	Pensacola	850-433-2191	Miscellaneous	4	C

Table 3-4 Santa Rosa County Critical Facilities

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT.	NFIP
1	JAY AIRPORT		JAY	850-675-4817	AIRPORT	0.	C
2	PETER PRINCE FIELD (MILTON AIRPORT)	N AIRPRT RD	MILTON	850-983-2446	AIRPORT	0.	C
3	ANNETTE'S REST HOME	6913 OLSEN RD	BAGDAD	850-623-5178	NURSING/CONVALESCENT	0.	C
4	BAY BREEZE NURSING AND RETIREMENT CENTER	3375 GULF BREEZE PARKWAY	GULF BREEZE	8509329257	NURSING HOME	0.	C
5	BROOKSIDE GABLES	1745 WHITMIRE ROAD	MILTON	850-626-1111	ADULT CONGRETATE LIVING FACILITY	0.	C
6	SANDY RIDGE CARE CENTER	101 GLOVER LANE	MILTON	850-626-9225	NURSING HOME	0.	C
7	SANDY RIDGE CARE CENTER	101 GLOVER LANE	MILTON	850-626-9255	EMERGENCY MEDICAL SERVICES	0.	C
8	SANTA ROSA CONVALESCENT CENTER	500 BROAD STREET	MILTON	850-623-4661	NURSING HOME	0.	C
9	SANTA ROSA CONVALESCENT CENTER	500 BROAD ST	MILTON	850-623-4661	NURSING CARE ELDERLY INFIRMED	2.	A
10	SUMMER SET	4029 GARCON PT. ROAD	MILTON	850-623-6181	ADULT CONGRETATE LIVING FACILITY	0.	C
11	SUMMER SET	4029 GARCON POINT RD	MILTON	850-623-6181	NURSING/CONVALESCENT HOME	0.	C
12	ALLENTOWN VOLUNTEER FIRE DEPARTMENT	9482 HWY 89	JAY	850-623-4382	FIRE AND RESCUE	0.	C
13	AVALON BEACH-MULAT VOL FIRE DEPT		MILTON	850-994-4445	FIRE SUPPRESSION/RESCUE	0.	C
14	BAGDAD VOLUNTEER FIRE DEPARTMENT	7043 OAK ST	BAGDAD	850-623-8610	FIRE DEPARTMENT	0.	A
15	EAST MILTON VOL FIRE DEPT	5081 WARD BASIN RD	MILTON	850-626-0122	FIRE AND RESCUE	0.	C
16	EAST MILTON VOL FIRE DEPT	HWY 87 SOUTH	MILTON	850-623-0674	FIRE AND RESCUE	0.	C
17	HAROLD VOLUNTEER FIRE DEPARTMENT	6001 MILLER BLUFF RD	MILTON	850-626-8510	FIRE FIGHTING	0.	C
18	HOLLEY-NAVARRE VOL FIRE DEPARTMENT	8618 ESPLANDE ST	NAVARRE	850-939-6070	FIRE DEPARTMENT	5.	C
19	JAY CITY FIRE DEPARTMENT	100 BOOKER LN	JAY	850-675-6375	FIRE DEPARTMENT	0.	C

Table 3-4 Santa Rosa County Critical Facilities (con't)

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT.	NFIP
20	JAY VOL FIRE DEPARTMENT	12781 HWY 89	JAY	850-675-6218	FIRE DEPT	0.	C
21	MIDWAY VOL FIRE DEPARTMENT	1801 AMBERCROMBIE RD	GULF BREEZE	850-932-4771	FIRE/RESCUE	0.	C
22	MIDWAY VOL FIRE DEPARTMENT STAT.2	1264 ORIOLE BEACH RD	GULF BREEZE		FIRE/RESCUE	0.	C
23	MILTON FIRE DEPARTMENT	202 SUSAN ST	MILTON	850-623-3887	FIRE DEPT	5.	X500
24	NAVARRE BEACH VOL FIRE DEPARTMENT	8220 GULF BLVD	NAVARRE BEACH	850-939-2448	FIRE/RESCUE	0.	C
25	PACE VOLUNTEER FIRE DEPARTMENT	4541 MAJOR ST	PACE	850-994-5295	FIRE HOUSE	1.	VE
26	PACE VOLUNTEER FIRE DEPT	5527 WOODBINE RD	PACE	850-994-5295	FIRE HOUSE	0.	C
27	SKYLINE VOLUNTEER FIRE DEPARTMENT STA-3	5415 RUFUS RD	MILTON	850-623-1391	FIRE AND RESCUE	0.	C
28	SKYLINE VOLUNTEER FIRE DEPT STATION 1	FIREHOUSE RD	MILTON	850-623-1391	FIRE AND RESCUE	0.	C
29	SKYLINE VOLUNTEER FIRE DEPT STATION 2	EAST GATE ROAD	MILTON	850-623-1391	FIRE AND RESCUE	0.	C
30	AMERIGAS INCORPORATED, L.P.	7224 HIGHWAY 90 E	MILTON		FUEL STORAGE	0.	C
31	BLOSSMAN GAS - MILTON BULK PLANT	MURPHY CASSIDY ROAD	MILTON		FUEL STORAGE	0.	C
32	CORNERSTONE PROPANE - PENSACOLA	4536 HIGHWAY 90	MILTON		FUEL STORAGE	0.	C
33	FLORIDA GAS TRANSMISSION CO. 12	ROUTE 1, BOX 146	MILTON	4100000000	SEWAGE TREATMENT PLANT	0.	C
34	FLORIDA GAS TRANSMISSION COMPANY	RT 1 BOX 146	MILTON	850-957-4221	GAS PIPELINE	0.	C
35	NATIONAL PROPANE - 2436	7064 HIGHWAY 90 EAST	MILTON		FUEL STORAGE	0.	C
36	PETROLANE GAS SERVICE - MILTON	7224 HIGHWAY 90 EAST	MILTON		HAZARDOUS MATERIALS	0.	C
37	AIR PRODUCTS & CHEMICALS INC.	US HWY 90 EAST	PACE	9000000000	SEWAGE TREATMENT PLANT	0.	C
38	AIR PRODUCTS AND CHEMICALS - PACE	4575 US 90 EAST	MILTON		HAZARDOUS MATERIALS	0.	C
39	AVALON UTILITIES	3220 AVALON BOULEVARD	MILTON	8509948200	SEWAGE TREATMENT PLANT	0.	C

Table 3-4 Santa Rosa County Critical Facilities (con't)

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT.	NFIP
40	BAGDAD GARCON POINT WATER SYSTEMS	6368 DELISA RD	BAGDAD	850-623-8508	POTABLE WATER DISTRIBUTION	0.	C
41	BAGDAD-GARCON WATER WELL 1	6825 POOLEY STREET	BAGDAD	850-623-8508	WATER TREATMENT	0.	C
42	BAGDAD-GARCON WATER WELL 3	6368 DALISA ROAD	BAGDAD	850-623-8508	WATER TREATMENT	0.	C
43	CHUMUCKLA WATER SYST WELL 2	7950 CHUMUCKLA HYW (CR 197)	PACE	850-994-3001	WATER TREATMENT	0.	C
44	CHUMUCKLA WATER SYSTEM WELL 3	2450 CR 182	PACE	850-994-3001	POTABLE WATER DISTRIBUTION	0.	C
45	CHUMUCKLA WATER SYSTEM WELL 4	6166 QUINTEET ROAD	PACE	850-994-3001	POTABLE WATER DISTRIBUTION	0.	C
46	EAST MILTON WATER WELL 1	8463 BILLY BOB LANE	MILTON	850-623-8750	HAZARDOUS MATERIALS	0.	C
47	EAST MILTON WATER WELL 2	5508 TRACI DRIVE	MILTON	850-623-8750	HAZARDOUS MATERIALS	0.	C
48	EAST MILTON WATER WELL 3	6007 MILLER BLUFF RD	MILTON	850-623-8750	PUMP POTABLE WATER	0.	C
49	EAST MILTON WATER WELL 4	5776 EAST MILTON RD	MILTON	850-623-8750	PUMP POTABLE WATER	0.	C
50	EXXON COMPANY USA-ST REGIS GAS PLAN	NORTH END OF OIL PLANT RD	JAY	850-675-1730		0.	C
51	GULF BREEZE WTP	1203 GULF BREEZE PKWY	GULF BREEZE	850-934-5100	WATER TREATMENT	5.	C
52	HOLLEY-NAVARRE WASTEWATER SYSTEM	8574 TURKEY BLUFF ROAD	NAVARRE	850-939-2427	SEWAGE TREATMENT PLANT	0.	C
53	HOLLEY-NAVARRE WATER WELL 1	ADJACENT TO 8574 TURKET BLUFF RD	NAVARRE	850-939-2427	WATER TREATMENT	0.	C
54	HOLLEY-NAVARRE WATER WELL 2	RIVER RD 1/4 MI NORTH OF SR 87	NAVARRE	850-939-2427		0.	A
55	HOLLEY-NAVARRE WATER WELL 3	WHISPERING PINES BLVD 1/4 MI N OF US 98	NAVARRE	850-939-2427		0.	C
56	HOLLEY-NAVARRE WATER WELL 4	SHANNON RD 1/4 MI NORTH OF US 98	NAVARRE	850-939-2427		0.	C
57	IMC FARMARKET #358	3525 HIGHWAY 4	JAY	850-675-6419		0.	C
58	INTERSTATE BATTERIES	5908 COMMERCE RD	MILTON	850-623-2977		0.	C

Table 3-4 Santa Rosa County Critical Facilities (con't)

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT.	NFIP
59	JAY PEANUT FARMERS CO-OP INC	211 COMMERCE ST	JAY	850-675-4597		0.	C
60	K-MART CORPORATION STORE #3975	6060 HIGHWAY 90	MILTON	850-623-6260		0.	C
61	JAY, TOWN OF (STP)	100 SCHOOL STREET	JAY	850-675-4556	SEWAGE TREATMENT PLANT	0.	C
62	MIDWAY WATER SYSTEM - STATION 1	1814 HIGHWAY 87	GULF BREEZE	850-932-5188	HAZARDOUS MATERIALS	5.	C
63	MIDWAY WATER SYSTEM - STATION 2	7689 EAST BAY BOULEVARD	GULF BREEZE	850-932-5188	HAZARDOUS MATERIALS	0.	C
64	MIDWAY WATER SYSTEM INC	4971 GULF BREEZE PKWY	GULF BREEZE	850-932-5188	WATER REPUMP FACILITY	0.	C
65	MILTON, CITY OF WWTP	EAST WALKER ST	MILTON	850-983-5461	WATER TREATMENT	1.	A
66	MITLON,WATER WELL 1	ON SUSAN ST BEHIND MILTON FD	MILTON	850-983-5461	WATER TREATMENT	5.	X500
67	MILTON,WATER WELL 3	BYROM AND GRACE STs	MILTON	850-983-5461	WATER TREATMENT	0.	C
68	MITLON,WATER WELL 4	BERRYHILL RD @ FAIRVIEW DRIVE	MILTON	850-983-5461	WATER TREATMENT	0.	C
69	MILTON,WATER WELL 5	NORTHROP RD & STARLIGHT DR	MILTON	850-983-5461	WATER TREATMENT	0.	C
70	MILTON,WATER WELL 6	APPALOOSA ST & DOGWOOD DR	MILTON	850-983-5461	WATER TREATMENT	0.	C
71	MOORE CREEK-MT. CARMEL UTILITIES #1	HIGHWAY 89 SOUTH	JAY	850-807-9254	WATER TREATMENT	0.	C
72	MOORE CREEK-MT. CARMEL UTILITIES #2	NOWLING RD 1.25 MI EAST OF SR 89	JAY	850-807-9254	WATER TREATMENT	0.	C
73	NAVARRE BEACH STP	8220 GULF BOULEVARD	NAVARRE BEACH	850-939-2387	SEWAGE TREATMENT PLANT	0.	C
74	NAVARRE BEACH, WELL #2	8550 GULF BOULEVARD	NAVARRE BEACH	850-939-2387	WATER TREATMENT	0.	C
75	NAVARRE BEACH, WELL #3	8000 WHITE SANDS BLVD	NAVARRE BEACH	850-939-2387	WATER TREATMENT	0.	C
76	PACE WATER SYSTEM	4401 WOODBINE RD	PACE	850-994-5129	PUBLIC WATER/WASTE WATER	0.	C
77	PACE WATER SYSTEM, WELL #1	CHURCH ST BEHIND PACE VFD	PACE	850-994-5129	WATER TREATMENT	0.	C

Table 3-4 Santa Rosa County Critical Facilities (con't)

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT.	NFIP
78	PACE WATER SYSTEM, WELL #2	805 WHITE ROAD	PACE	850-994-5129	WATER TREATMENT	0.	C
79	PACE WATER SYSTEM, WELL #3	US HWY 90, 300 FT W OF BELL LN	PACE	850-994-5129	WATER TREATMENT	0.	C
80	PACE WATER SYSTEM, WELL #4	MULAT RD 1/2 MI S OF CYANAMID RD	PACE	850-994-5129	WATER TREATMENT	0.	C
81	PACE WATER SYSTEM, WELL #5	342 GREGG AVENUE	PACE	850-994-5129	WATER TREATMENT	0.	C
82	PACE WATER SYSTEM, WELL #6	KINGERY RD 1/4 MI W OF AVALON BLVD	PACE	850-994-5129	WATER TREATMENT	0.	C
83	PACE WATER SYSTEM, WELL #7	3930 BERRYHILL RD	PACE	850-994-5129	WATER TREATMENT	0.	C
84	PACE WATER SYSTEM, WELL #8	3930 ADAMS RD	PACE	850-994-5129	WATER TREATMENT	0.	C
85	PETRO OPERATION COMPANY	4940 BLACKJACK PLANT ROAD	JAY	850-675-4494	HAZARDOUS MATERIALS	0.	C
86	POINT BAKER WATER SYSTEM, WELL #1	7857 SR 89 NORTH	MILTON	850-623-6238 /4545	WATER TREATMENT	0.	C
87	POINT BAKER WATER SYSTEM, WELL #3	6857 HWY 89	MILTON	850-623-6238 /4545	WATER TREATMENT	0.	C
88	POINT BAKER WATER SYSTEM, WELL #4	6687 MCLAUGHLIN ROAD	MILTON	850-623-6238 /4545	WATER TREATMENT	0.	C
89	POINT BAKER WATER SYSTEM, WELL #5	5891 MIMOSA AVENUE	MILTON	850-623-6238 /4545	WATER TREATMENT	0.	C
90	POINT BAKER WATER SYSTEM, WELL #6	8660 SR 89 (S OF ALLENTOWN XROADS)	MILTON	850-623-6238 /4545	WATER TREATMENT	0.	C
91	SANTA ROSA COUNTY I-10 REST AREA WWTP	APPROXIMATELY 4 MILES EAST OF MILTON ON	MILTON	8506380250	SEWAGE TREATMENT PLANT	0.	C
92	SOUTH SANTA ROSA UTILTY SYS-WWTP	1150 CIRCLE LANE	GULF BREEZE	850-932-3528	WATER TREATMENT	5.	C
93	STERLING FIBERS, INC.	5005 STERLING WAY	PACE	850-994-2503	CHEMICLA PLANT	0.	C
94	UWF INSTITUE OF FOOD & AGRIC	4253 EXPERIMENT DRIVE	JAY	850-983-9578	IFAS RESEARCH & EDUCATION	0.	C
95	GULF BREEZE HOSPITAL	1110 GULF BREEZE PARKWAY	GULF BREEZE	850-934-2100	HOSPITAL	0.	C

Table 3-4 Santa Rosa County Critical Facilities (con't)

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT.	NFIP
96	JAY HOSPITAL	221 SOUTH ALABAMA STREET	JAY	850-675-4532	HOSPITAL	0.	C
97	SANTA ROSA MEDICAL CENTER	1450 BERRYHILL ROAD	MILTON	850-626-7762	HOSPITAL	0.	C
98	SANTA ROSA MEDICAL CENTER	1450 BERRYHILL RD	MILTON	850-626-5100	HOSPITAL	0.	C
99	WEST FLORIDA COMMUNITY CARE CENTER	5500 STEWART NT	MILTON	850-983-5500	HOSPITAL	0.	C
100	CAMP E-MA-CHAMEE	RT. 1 BOX 178A	MILTON	8504879939	SEWAGE TREATMENT PLANT	0.	C
101	HAROLD NOLF	HIGH 90 EAST	MILTON		AIRPORT	0.	C
102	HOLLEY NOLF	EAST BAY BLVD	NAVARRE		AIRPORT	0.	C
103	N.A.S. WHITING FIELD	HIGHWAY 87A	MILTON		WATER TREATMENT	0.	C
104	CHOCTAW OLF	7599 CHOCTAW FIELD RD	NAVARRE	850-452-4763		0.	C
105	SANTA ROSA NOLF	EAST BAY BLVD	NAVARRE		AIRPORT	0.	C
106	UNITED STATES NAVY - WHITING FIELD	7550 USS ESSEX STREET	MILTON		HAZARDOUS MATERIALS	0.	C
107	WHITING FIELD N.A.S. STP	WHITING FIELD	MILTON	0	SEWAGE TREATMENT PLANT	0.	C
108	WHITING FIELD NAS-NORTH	HIGHWAY 87A	MILTON		AIRPORT	0.	C
109	WHITING FIELD NAS-SOUTH	HIGHWAY 87A	MILTON		AIRPORT	0.	C
110	GULF BREEZE POLICE DEPARTMENT	311 FAIRMONT DR	GULF BREEZE	850-934-5121	LAW ENFORCEMENT	5.	C
111	BERRYDALE FORESTRY CAMP	6920 Highway 4	JAY	850-488-3800	SEWAGE TREATMENT PLANT	0.	C
112	BGI OF PENSACOLA, DBA TWELVE OAKS	2068 HEALTHCARE AVE	NAVARRE	850-939-1200 EX11	MENTAL HEALTH FACILITY	0.	C
113	THE FRIARY	4400 HICKORY SHORES BLVD	GULF BREEZE	850-932-9375	RECOVERY	0.	C
114	BAGDAD ELEMENTARY	4512 Forsythe Street PO Box 255	BAGHDAD		SCHOOL	0.	A
115	BERRYHILL ELEMENTARY	4900 Berryhill Road	MILTON	850-983-5690	SCHOOL	5.	X500
116	CENTRAL HIGH SCHOOL	6180 CENTRAL SCHOOL RD	MILTON	850-983-5640	SCHOOL	0.	C

Table 3-4 Santa Rosa County Critical Facilities (con't)

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT.	NFIP
117	CHUMUCKLA ELEM SCHOOL	2312 HWY 182	JAY	850-994-5288	SCHOOL	0.	C
118	DIXON INTERMEDIATE	5540 EDUCATION DR	PACE	850-994-6697	SCHOOL	0.	C
119	DIXON PRIMARY SCHOOL	5540 SS DIXON RD	PACE	850-994-5343	SCHOOL	0.	C
120	EAST MILTON ELEM	5156 WARD BASIN RD	MILTON	850-983-5620	SCHOOL	0.	C
121	GULF BREEZE ELEMENTARY	549 Gulf Breeze Parkway	GULF BREEZE	850-932-9257	SCHOOL	0.	C
122	GULF BREEZE HIGH	675 GULF BREEZE PKWY	GULF BREEZE	850-916-4100	SCHOOL	0.	C
123	GULF BREEZE MIDDLE SCHOOL	649 GULF BREEZE PKWY	GULF BREEZE	850-934-4080	SCHOOL	0.	C
124	HOBBS MIDDLE SCHOOL	309 GLOVER LANE	MILTON	850-983-5630	SHELTER	0.	C
125	HOLLEY NAVARRE INTERMEDIATE	1936 NAVARRE SCHOOL RD	NAVARRE	850-939-2377	SCHOOL	0.	C
126	HOLLEY NAVARRE MIDDLE SCHOOL	1976 WILLIAMS CREEK RD	NAVARRE	850-939-7074	SCHOOL	0.	C
127	HOLLEY NAVARRE PRIMARY	1955 LOWE RD	NAVARRE	850-939-9848	SCHOOL	0.	C
128	HOLLEY-NAVARRE INTERMEDIATE	1936 Navarre School Rd.	HOLLEY-NAVARRE	850-939-2377	SCHOOL	0.	C
129	HOLLY-NAVARRE HIGH	8600 High School Blvd.	HOLLEY-NAVARRE	850-939-1888	SCHOOL	0.	C
130	HOLLY-NAVARRE MIDDLE	1976 Williams Creek Road	HOLLEY-NAVARRE	850-939-7074	SCHOOL	0.	C
131	HOLLY-NAVARRE PRIMARY	1955 Lowe Road	HOLLEY-NAVARRE	850-939-9848	SCHOOL	0.	C
132	JACKSON PRE K	4950 SUSAN ST	MILTON	850-983-5720	SCHOOL	3.	A
133	JAY ELEM SCHOOL	4949 ALABAMA ST	JAY	850-675-4554	SCHOOL	0.	C
134	JAY HIGH SCHOOL	4955 ALABAMA ST	JAY	850-675-4507	SCHOOL	0.	C
135	KING MIDDLE	2400 STEWART ST	MILTON	850-983-5660	SCHOOL	0.	C
136	LOCKLIN TECHNICAL CENTER	5530 BERRYHILL RD	MILTON	850-983-5700	SCHOOL	0.	C
137	MILTON HIGH SCHOOL	103 STEWART ST	MILTON	850-983-5600	SCHOOL	0.	C
138	MUNSON ELEM	11550 MUNSON HIGHWAY	MILTON	850-957-4216	SCHOOL	0.	C
139	NAVARRE HIGH SCHOOL	8600 HIGH SCHOOL BLVD	NAVARRE	850-939-1888	SCHOOL	0.	C

Table 3-4 Santa Rosa County Critical Facilities (con't)

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT.	NFIP
140	ORIOLE BEACH ELEMENTARY	1260 Oriole Beach Road	GULF BREEZE	850-934-5160	SCHOOL	0.	C
141	PACE HIGH SCHOOL	4065 NORRIS RD	PACE	850-994-5193	SCHOOL	0.	C
142	PACE MIDDLE	4085 NORRIS RD	PACE	850-994-4013	SCHOOL	0.	C
143	PEA RIDGE ELEM	4775 SCHOOL LANE	PACE	850-994-9656	SCHOOL	0.	C
144	RHODES ELEMENTRY	800 BYROM ST	MILTON	850-983-5670	SCHOOL	0.	C
145	SIMS MIDDLE SCHOOL	5500 Education Drive	PACE	850-995-3636	SCHOOL	0.	C
146	SS DIXON INTERMEDIATE SCHOOL	5540 Education Drive	PACE	850-995-3650	SCHOOL	0.	C
147	SS DIXON PRIMARY	4585 SS Dixon Road	PACE	850.995.3660	SCHOOL	0.	C
148	SANTA ROSA SHERIFF'S OFFICE	5755 EAST MILTON RD	MILTON	850-983-1100	LAW ENFORECEMENT/CORRECTIONS	0.	C
149	MIDWAY SANITATION WT FAC	4729 GULF BREEZE PARKWAY	GULF BREEZE		LAND FILL ACTIVE	0.	C
150	SRC EMERGENCY COMMUNITCATIONS	5819 GULF BREEZE PKWY	GULF BREEZE	850-983-5360	TOWER	0.	C
151	SRC EMERGENCY COMMUNITCATIONS	4499 PINE FOREST RD	MILTON	850-983-5360	TOWER	0.	C
152	SRC EMERGENCY COMMUNITCATIONS	HWY 4 8 MI EAST OF JAY	JAY	850-983-5360	TOWER	0.	C
153	SRC EMERGENCY COMMUNITCATIONS	6000 FAILANDS RD	MILTON	850-983-5360	TOWER	0.	C
154	BELLSOUTH TELE (GULF BREEZE)	98 MCLURE DRIVE	GULF BREEZE	850-763-9045	BELL SOUTH SUB STATION	0.	C
155	BELLSOUTH TELE (MILTON)	207 RAVINE ST	MILTON	850-763-9045		2.	A
156	BELLSOUTH TELE (NAVARRE)	1810 STATE RD 87	NAVARRE	850-763-9045		0.	C
157	BELLSOUTH TELE (PACE)	4351 HIGHWAY 90 EAST	PACE	850-763-9045		0.	C
158	CHUMUCKLA WATER SYS (WELL #2)	7950 CHUMUCKLA HIGHWAY	PACE	850-994-9590		0.	C
159	CHUMUCKLA WATER SYS (WELL #3)	2450 CR 182	JAY	850-994-9590		0.	C
160	PIER 1	49 GULF BREEZE PKWY	GULF BREEZE	932-6777		0.	C
161	BY THE BAY VILLAGE	1527 MAGNOLIA MANOR DR	GULF BREEZE			0.	C

Table 3-4 Santa Rosa County Critical Facilities (con't)

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT.	NFIP
162	COLEMANS COURT	6101 EAST BAY BLVD	GULF BREEZE	934-8403		3.	C
163	MAGNOLIA MANOR	1526 MAGNOLIA MANOR DR	GULF BREEZE	932-6415		0.	C
164	SNAPPER HITCH	1630 RED FISH POINT RD	GULF BREEZE	932-6415		2.	C
165	COSTAL OAKS	2786 GULF BREEZE PARKWAY	GULF BREEZE			0.	C
166	WESTVIC HOLIDAY SANDS	SUNNY OAK DR	GULF BREEZE			0.	C
167	REBECCA'S HOLLOW	3251 BOB TOLBERT RD	HOLLEY	581-4400		0.	C
168	MILLERS BLUFF FISH CAMP	12375 SHAMMAH RD	HAROLD			4.	A
169	LUNSFORD'S	CUSTER LANE	JAY	623-4222		0.	C
170	SIMMONS	9112 ROY COOK RD	JAY	994-8865		0.	C
171	ABC	3216 HWY 87 N	MILTON	623-8453		0.	C
172	BAGDAD	661 OLD BAGDAD HWY	MILTON	484-6881		5.	C
173	BARNES	4059 DRISKILL RD	MILTON	623-5875		1.	A
174	BROWNS FISH CAMP	3400 WARD BASIN RD	MILTON	623-6102		2.	A
175	D&D	4066 DAWSON LANE	MILTON	994-7918		0.	C
176	DAN WEAVER	6430 WHITING AVE	MILTON			0.	C
177	EAST BAY	1160 PINE ST	MILTON			4.	C
178	EAST GATE RANCH	WHITING EAST GATE RD	MILTON	626-8245		0.	C
179	EDGEWOOD	WEST MILTON HEIGHTS	MILTON	623-8721		0.	C
180	FALCON PLACE	HWY 89 N	MILTON			0.	C
181	Fays (BRITT D'S)	6401 HOWARD AVE	MILTON	623-3208		0.	C
182	HAMMVILLE	8700-8720 JOHN HAMM RD	MILTON	623-1551		0.	C
183	J&J	134 KINGERY RD	MILTON	994-7918		0.	C
184	J&J PONDEROSA	5925 CARROLL RD	MILTON	994-6544		0.	C

Table 3-4 Santa Rosa County Critical Facilities (con't)

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT.	NFIP
185	JAMES L BROXSON	GARCON POINT RD	MILTON	623-3906		0.	C
186	K&N	6484 HOWARD AVE	MILTON			0.	C
187	LAZY ACRE	506 CONECUH ST/507 BROAD ST	MILTON	623-8412		0.	C
188	MARY L VAUGHN	7174 HWY 89 N	MILTON	623-6985		0.	C
189	NORTH SIDE	702 ALABAMA ST	MILTON	623-9739		0.	C
190	POLLARDS	1201 ALLEN ST	MILTON	994-7918		0.	C
191	ROBERTS COUNTRY	7274 Milford Rd	MILTON	623-9902		0.	C
192	SHADYOAKS	810 MUNSON HWY	MILTON	623-3548		0.	A
193	SKI-LAND FISH CAMP	4109 Driskell Rd	MILTON	983-2067		3.	C
194	SOUTHERN HILLS	AVALON BLVD	MILTON	626-8245		0.	C
195	SUNBURST RESORT INC	2375 Home Rd	MILTON	675-6807		0.	C
196	SUNSHINE PARK	4336 SUNSHINE PK DR	MILTON			0.	C
197	THE OAKS	4335 GARCON POINT RD	MILTON	623-4884		5.	C
198	THE PINES VILLAGE	1024 GARCON POINT RD	MILTON	623-6055		0.	C
199	VANITY FAIR	1415 VANITY FAIR RD	MILTON	994-4917		0.	C
200	VILLAGE ESTATES	6400 BRUCE LANE	MILTON	626-9461		0.	C
201	WESTGATE	26 WESTGATE DR HWY 87 N	MILTON			0.	C
202	BLACK JACK	BLACK JACK CIR	NAVARRE			0.	C
203	COLONIAL PINES	2101 COLONIAL AVE	NAVARRE	939-2389		0.	C
204	FALCONHURST	2000 FALCONHURST PLACE	NAVARRE	939-2414		0.	C
205	FERRELLS	2224 CRESCENTWOOD RD	NAVARRE	939-9826		0.	C
206	HARDIES #1	9950 HWY 98W	NAVARRE	939-3562		0.	C
207	HARDIES #2	90-99 WINDTRACE NORTH	NAVARRE	939-3562		0.	C

Table 3-4 Santa Rosa County Critical Facilities (con't)

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT.	NFIP
208	HARDIES #3	507 LUNETA ST	NAVARRE	939-3562		5.	C
209	NAVARRE	#10 KIEFERNWALD CIR	NAVARRE			0.	C
210	NAVARRE EAST	9212 EAGLE NEST DR	NAVARRE			0.	C
211	PAISLEY SHORES	6945 NAVARRE PKWY	NAVARRE			0.	C
212	RAINBOW	CARLOS AND GRANADA	NAVARRE			5.	C
213	ROBERT CARL	9265 DEER LANE	NAVARRE	939-0506		0.	C
214	SOUND SIDE MANOR	Blankenship Rd	NAVARRE	939-3562		2.	A
215	STILL WATERS	2105 TOM ST	NAVARRE	939-1965		0.	C
216	SUNSET PINES	405 SUNSET LANE	NAVARRE			0.	C
217	ZUMBIELS	9288 DEER LANE	NAVARRE			0.	C
218	BAY BREEZE	KENTWOOD ST/Burns/San Diego St	PACE	994-5703		0.	C
219	BAY VIEW	3957 PARKVIEW ST	PACE	994-5703		4.	C
220	BRAXTON	4724 JERRY DR	PACE	994-5304		0.	C
221	CARTERS (Bowen's)	3902 BOWENS COURT	PACE	995-9658		0.	C
222	DALLAS	3931 HWY 90	PACE	994-6458		0.	C
223	FLORLANDA	4572 FLORLANDA CR	PACE	994-9733		0.	C
224	HOLDEN	4440 PACE LANE	PACE	994-7918		0.	C
225	HUDSON'S VILLAGE	4374 JERNIGAN RD	PACE	994-8159		0.	C
226	Jernigan	4451 JERNIGAN RD	PACE	994-8159		0.	C
227	KING OAKS	1090 PACE LANE	PACE	478-5468		0.	C
228	LANDMARK	4755 LANDMARK LANE	PACE	994-8159		0.	C
229	PACE	4025 VERN ST	PACE	994-7918		0.	C
230	PALOMINO	4627 WOODBINE RD	PACE	994-6208		0.	C

Table 3-4 Santa Rosa County Critical Facilities (con't)

No.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT.	NFIP
231	PEA RIDGE	4584 TAMARIND DR	PACE	994-4561		0.	C
232	QUAIL RUN	4569 WALDROP CIR	PACE	477-7239		0.	C
233	Rivera Naturist Resort	5000 GURENSEY RD	PACE	994-3665		0.	C
234	STARLITE	4001 WILKES ST	PACE			0.	C
235	TAMARIND	4581 TAMARIND DR	PACE	994-7918		0.	C
236	WESTMONT	4581 DAVENPORT LN	PACE	994-8159		0.	C
237	CHEROKEE	5255 GULF BREEZE PKWY	GULF BREEZE	932-9905		0.	C
238	HUNTER REST	6240 SUNCREST COURT	GULF BREEZE			0.	C
239	THE FLEA MARKET	5760 GULF BREEZE PKWY	GULF BREEZE	934-1971		0.	C
240	BLACKWATER STATE PARK	7720 DEATON BRIDGE RD	HAROLD	623-2363		0.	A
241	BEAR LAKE REC AREA	1 1/2 MILES EAST OF HWY 4	MILTON	957-4590		0.	AE
242	BY THE BAY	5550 MICHAEL DR	MILTON	623-0262		2.	A
243	CEDAR LAKE	4312 COACHMAN RD	MILTON	626-9291		4.	C
244	CEDAR PINES	HWY 87 N	MILTON	623-8869		0.	C
245	COLDWATER RECREATIONAL AREA	4 MI S OF HY 4 OFF OF HY 87N	MILTON	957-4590		0.	C
246	GULF PINES FAMILY RESORT	8700 GULF PINES DR	MILTON	623-0808		0.	C
247	HELEN'S	4165 WARD BASIN RD	MILTON	623-4711		3.	C
248	LAKE KRISTINA	11111 MUNSON HWY	MILTON	623-3734		0.	C
249	SUNNY ACRES RESORT	3700 GARCON POINT RD	MILTON	623-0576		0.	C
250	KRUL RECREATION AREA	3/4 MI E OF HY 191 ON HY 4	MUNSON	957-4590		0.	C
251	EMERALD BEACH	8899 NAVARRE PKWY	NAVARRE	939-3431		4.	C
252	MAGNOLIA BEACH	9807 NAVARRE PKWY	NAVARRE	939-2717		0.	C
253	NAVARRE BEACH	9201 NAVARRE PKWY	NAVARRE	939-2188		0.	C

Table 3-5 Okaloosa County Critical Facilities

NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	NFIP	CAT
1	FT. WALTON BEACH FD	5 HOLLYWOOD BLVD NE, FT.	Ft. Walton Beach	850-585-9154	FIRE DEPARTMENT	C	5.
2	FT. WALTON BEACH POLICE DEPT	5 HOLLYWOOD BLVD NE, FT.	Ft. Walton Beach	(850) 833-9532	POLICE DEPARTMENT	C	5.
3	FT. WALTON BEACH ST 7	Lewis turner Blvd	Ft. Walton Beach	850-585-9154	FIRE DEPARTMENT	C	0.
4	FLOROSA VFD	1900 W HWY 98	Florosa	(850) 581-2900	FIRE DEPARTMENT	C	5.
5	MARY ESTHER FD	195 CHRISTOBAL RD	Mary Esther	(850) 243-5632	FIRE DEPARTMENT	C	0.
6	OCEAN CITY WRIGHT FD ST 2	1252 N EGLIN PKY	Shalimar	850-862-1185	FIRE DEPARTMENT	C	5.
7	OCEAN CITY WRIGHT FD MAIN	2 NE RACETRACK RD	Ft. Walton Beach	850-862-1185	FIRE DEPARTMENT	C	0.
8	OCEAN CITY WRIGHT ST 3	24 OAK ST	Ft. Walton Beach	850-862-1185	FIRE DEPARTMENT	C	0.
9	OKALOOSA ISLAND FD	105 SANTA ROSA BLVD	Ft. Walton Beach	850-244-5373	FIRE DEPARTMENT	C	4.
10	DESTIN FD MAIN STATION	848 Airport Rd	Destin	(850) 837-8413	FIRE DEPARTMENT	C	0.
11	DESTIN FD CRYSTAL BCH STATION	117 Crystal Bch Dr.	Destin	850-837-8413		C	0.
12	BAKER VFD	5807 MONROE ST	Baker	850-537-5759	FIRE DEPARTMENT	C	0.
13	CRESTVIEW FD MAIN	203 WOODRUFF AVE	Crestview	850-682-6121	FIRE DEPARTMENT	C	0.
14	CRESTVIEW FD SOUTH	2112 PJ Adams Pky	Crestview	850-682-6121		C	0.
15	DORCAS VFD ST1	5871 CR 393	Dorcas	850-682-3704	FIRE DEPARTMENT	C	0.
16	NICEVILLE VFD	102 ARMSTRONG AVE	Niceville	850-729-4050	FIRE DEPARTMENT	C	0.
17	NORTH OKALOOSA FD AIRPORT STN	5545 JOHN GIVENS RD	Crestview	850-689-3507	FIRE DEPARTMENT	C	0.
18	NORTH OKALOOSA FD AUBURN STN	6186 HWY 85 N	Crestview	850-689-3507	FIRE DEPARTMENT	C	0.
19	NORTH OKALOOSA FD MILLIGAN STN	5241 HWY 4	Crestview	850-689-3507	FIRE DEPARTMENT	C	0.
20	VALPARAISO FD	431 HWY 190	Valparaiso	850-729-5400	FIRE DEPARTMENT	C	0.
21	CRESTVIEW POLICE	203 WOODRUFF AVE W	Crestview	850-682-2055	POLICE DEPARTMENT	C	0.
22	MARY ESTHER PUBLIC SAFETY	195 CHRISTOBAL RD	Mary Esther	850-243-3566	POLICE DEPARTMENT	C	5.

Table 3-5 Okaloosa County Critical Facilities (con't)

NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	NFIP	CAT
23	NICEVILLE POLICE	212 NORTH PARTIN DR	Niceville	850-729-4034	POLICE DEPARTMENT	C	0.
24	OKALOOSA SHERIFF DESTIN DISTRICT	7 STAHLMAN AVE	Destin	850-651-7410		C	0.
25	OKALOOSA SHERIFF SOUTH OFFICE	1250 N EGLIN PKY	Shalimar	850-651-7410	SHERIFF DEPARTMENT	C	5.
26	OKALOOSA SHERIFF NORTH OFFICE	296 BRACKIN ST	Crestview	850-689-5556	SHERIFF DEPARTMENT	C	0.
27	OKALOOSA COUNTY CORRECTIONS	1200 JAMES LEE BLVD E	Crestview	850-689-5690	SHERIFF DEPARTMENT	C	0.
28	SHALIMAR POLICE	2 CHEROKEE DR	Shalimar		POLICE DEPARTMENT	C	4.
29	VALPARAISO POLICE	465 VALPARAISO PKY	Valparaiso	850-729-5400	POLICE DEPARTMENT	C	0.
30	CINCO BAYOU TOWN HALL	10 NE YACHT CLUB DR	Ft. Walton Beach	850-244-2712	GOVERNMENT BUILDING	C	5.
31	COUNTY ADMINISTRATION	1804 LEWIS TURNER BLVD	Ft. Walton Beach	850-651-7515	GOVERNMENT BUILDING	C	0.
32	DORCAS VFD ST2	5232 DEER SPRINGS DR	Dorcas	850-682-3704	FIRE DEPARTMENT	A	0.
33	COURTHOUSE ANNEX	1250 N EGLIN PKY	Shalimar	850-651-7150	GOVERNMENT BUILDING	C	0.
34	CRESTVIEW CITY HALL	198 N WILSON ST	Crestview	850-682-6121	GOVERNMENT BUILDING	C	0.
35	DETSIN CITY HALL	4200 TWO TREES RD	Destin	850-837-4242	GOVERNMENT BUILDING	C	0.
36	FT WALTON BEACH CITY HALL	107 SW MIRACLE STRIP PKY	Ft. Walton Beach	850-833-9504	GOVERNMENT BUILDING	C	2.
37	MARY ESTHER CITY HALL	195 CHRISTOBAL RD	Mary Esther	850-243-3566	GOVERNMENT BUILDING	C	5.
38	NICEVILLE CITY HALL	208 PARTIN DR	Niceville	850-729-4030	GOVERNMENT BUILDING	C	0.
39	PROPERTY APPRAISER	151D N EGLIN PKY	Ft. Walton Beach		GOVERNMENT BUILDING	C	5.
40	PROPERTY APPRAISER NORTH OFFIC	101 E JAMES LEE BLVD	Crestview		GOVERNMENT BUILDING	C	0.
41	SCHOOL DISTRICT	120 LOWERY PL	Ft. Walton Beach	850-833-3100	GOVERNMENT BUILDING	C	5.
42	SHALIMAR TOWN HALL	2 CHEROKEE DR			GOVERNMENT BUILDING	C	4.
43	TAX COLLECTOR	151C N EGLIN PKY	Ft. Walton Beach	850-651-7300	GOVERNMENT BUILDING	C	5.
44	EMERGENCY OPERATIONS CENTER	1250 N EGLIN PKY	Shalimar	850-585-9555	EMERGENCY OPERATION CENTER	C	5.
45	VALPARAISO CITY HALL	465 VALPARAISO PKY	Valparaiso	850-729-5402	GOVERNMENT BUILDING	C	0.

Table 3-5 Okaloosa County Critical Facilities (con't)

NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	NFIP	CAT
46	NORTH OKALOOSA MEDICAL CENTER	151 REDSTONE AVE	Crestview	850-689-8100	HOSPITAL	C	0.
47	TWIN CITIES HOSPITAL	SR 85 & COLLEGE BLVD	Niceville	850-678-4131	HOSPITAL	C	0.
48	BAY HERITAGE NURSING HOME	115 HART ST	Niceville	850-678-6667	NURSING/CONVALESCENT	C	0.
49	CRESTVIEW MANOR	601 N PEARL ST	Crestview		Retirement/ACLF	C	0.
50	CRESTVIEW NURSING HOME	1849 E 1ST ST	Crestview	850-682-5322	NURSING/CONVALESCENT	C	0.
51	COUNTY COURTHOUSE	101 JAMES LEE BLVD	Crestview	850-651-7515	GOVERNMENT BUILDING	C	0.
52	DESTIN HEALTHCARE & REHAB. CTR	195 MATTIE M. KELLY BLVD	Destin	850-654-4588	NURSING/CONVALESCENT	C	0.
53	EMERALDCOAST HEALTHCARE & REHA	114 THIRD ST	Ft. Walton Beach	850-243-6134	NURSING/CONVALESCENT	C	5.
54	FT WALTON BEACH CARE CENTER	1 LBJ SR. DR	Ft. Walton Beach	850-863-2066	NURSING/CONVALESCENT	C	0.
55	GULF COAST TREATMENT CENTER	1015 MARWALT DR	Ft. Walton Beach	850-863-4160	NURSING/CONVALESCENT	C	0.
56	FT WALTON BEACH DEVELOPMENT CE	120 BARKS DR	Ft. Walton Beach	850-862-0108	NURSING/CONVALESCENT	C	0.
57	MANOR AT BLUEWATER BAY	1500 N WHITE POINT RD	Niceville	850-897-5592	NURSING/CONVALESCENT	C	0.
58	SILVERCREST MANOR NURSING HOME	103 RUBY LN	Crestview	850-682-1903	NURSING/CONVALESCENT	C	0.
59	TWIN CITIES PAVILION	1053 JOHN SIMS PKY	Niceville	850-833-9212	NURSING/CONVALESCENT	C	0.
60	WESTWOOD HEALTHCARE	1001 MAR WALT DR	Ft. Walton Beach	850-863-5174	NURSING/CONVALESCENT	C	0.
61	ESSEX WWTP	714 ESSEX RD	Ft. Walton Beach	850-651-7172	SEWAGE TREATMENT	C	0.
62	DESTIN WATER USERS WWTP	5000 INDUSTRIAL PARK LN	Destin	850-837-6551	SEWAGE TREATMENT	C	0.
63	RUSSELL STEPHENSON WWTP	3182 HWY 98 W	Mary Esther	850-651-7172	SEWAGE TREATMENT	C	0.
64	CRESTVIEW WWTP	4520 ARENA RD	Crestview	850-682-6132	SEWAGE TREATMENT	C	0.
65	CRESTVIEW PUBLIC WORKS YARD	715 N FERDON BLVD	Crestview	850-682-6132	PUBLIC WORKS	C	0.
66	FWB WWTP	1564 PERCY COLEMAN RD	Ft. Walton Beach	850-833-9504	SEWAGE TREATMENT	C	0.
67	MARY ESTHER WWTP	195 CHRISTOBAL RD	Mary Esther	850-243-3566	SEWAGE TREATMENT	C	0.
68	NICEVILLE-OKALOOSA-VALPARAISO	507 CRESTVIEW AVE			SEWAGE TREATMENT	C	0.

Table 3-5 Okaloosa County Critical Facilities (con't)

NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	NFIP	CAT
69	INDUSTRIAL PARK WWTP	5581 FAIRCHILD RD	Crestview	850-651-7172	SEWAGE TREATMENT	C	0.
70	FT WALTON BEACH CITY YARD	205 HOLLYWOOD BLVD	Ft. Walton Beach	850-833-9504	MAINTENANCE	C	5.
71	OKALOOSA COUNTY PUBLIC WORKS Y	84 READY AVE	Ft. Walton Beach	850-689-5772	MAINTENANCE	C	0.
72	OKALOOSA COUNTY PUBLIC WORKS Y	2798 GOODWIND AVE	Crestview	850-689-5772	MAINTENANCE	C	0.
73	OKALOOSA COUNTY FACILITIES MAI	5489 OLD BETHEL RD	Crestview	850-689-5790	MAINTENANCE	C	0.
74	OKALOOSA COUNTY, SHALIMAR FUEL	1250 N EGLIN PKY	Shalimar	850-689-5772	FUEL STORAGE	C	5.
75	VALPARAISO PUBLIC WORKS	600 VOLASTICS AVE	Valparaiso	850-729-5402	PUBLIC WORKS	C	0.
76	BAKER COMMUNITY	SR 4 & SR 189		850-537-2000	EVACUATION	C	0.
77	CINCO BRIDGE	EGLIN PKY(SR 85)			BRIDGE	A	0.
78	CRYSTAL BEACH	DESTIN		850-837-8413	EVACUATION	C	0.
79	DESTIN(EAST PASS) BRIDGE				BRIDGE	VE	4.
80	DESTIN AIRPORT	10001 AIRPORT RD	Destin	850-651-7160	AIRPORT	C	0.
81	SHOAL RIVER BRIDGE	CR 393, DORCAS			BRIDGE	A	0.
82	FLOROSA COMMUNITY	US 98		850-581-2900	EVACUATION	C	4.
83	OKALOOSA AIR TERMINAL	1701 Hwy 85	Eglin AFB	850-651-7160	AIRPORT	C	0.
84	SANTA ROSA BLVD & U.S. HWY 98	OKALOOSA ISLAND		850-651-7400	EVACUATION	C	4.
85	SEASHORE VILLAGE COMMUNITY	US 98		850-581-2900	EVACUATION	C	5.
86	SHALIMAR BRIDGE	EGLIN PKY (SR 85)			BRIDGE	C	5.
87	SHOAL RIVER BRIDGE	SR 85			BRIDGE	A	0.
88	SHOAL RIVER BRIDGE	U.S. HWY 90 E			BRIDGE	A	0.
89	WYNNEHAVEN BEACH	US 98		850-581-2900	EVACUATION	C	5.
90	YELLOW RIVER BRIDGE	U.S. HWY 90 W			BRIDGE	A	0.
91	BOB SIKES AIRPORT	5486 FAIRCHILD RD	Crestview	850-651-7160	LANDING ZONE	C	0.

Table 3-5 Okaloosa County Critical Facilities (con't)

NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	NFIP	CAT
92	FWB FAIRGROUNDS	1958 LEWIS TURNER BLVD	Ft. Walton Beach	850-863-3768	LANDING ZONE	C	0.
93	MEIGS MIDDLE SCHOOL	150 RICHBOURG AVE	Shalimar	850-833-3100	LANDING ZONE	C	4.
94	MULLET FESTIVAL SITE	SR 85 & COLLEGE BLVD	Niceville	850-729-4034	LANDING ZONE	C	0.
95	OLD WAL-MART STORE	FERDON BLVD	Crestview		LANDING ZONE	C	0.
96	CRESTVIEW YOUTH CENTER	205 STILLWELL BLVD	Crestview	850-682-6121	LANDING ZONE	C	0.
97	BAKER COMMUNITY CENTER	5503 HWY 4	Baker	850-537-3220	SHELTER	C	0.
98	DESTIN COMMUNITY CENTER	3 STAHLMAN DR	Destin	850-837-4242	SHELTER	C	0.
99	DEWEY DESTIN CITY PARK & DESTI	724 - 726 LEGION DR	Destin	850-837-4242	SHELTER	C	0.
100	DOCIE BASS REC CENTER	54 FERRY AVE NE	Ft. Walton Beach	850-833-9504	SHELTER	A	4.
101	FWB SENIOR COMMUNITY CENTER	31 MEMORIAL SW	Ft. Walton Beach	850-833-9504	SHELTER	C	4.
102	FT WALTON SQUARE SHOPPING CTR	99 EGLIN PKY	Ft. Walton Beach		SHELTER	C	5.
103	HEDRICK REC CENTER	132 JET DR	Ft. Walton Beach	850-833-9504	SHELTER	C	5.
104	MARY ESTHER BAPTIST CHURCH	W HWY 98	Mary Esther		SHELTER	C	5.
105	OAK SHOPPING CENTER	1128 E JOHN SIMS PKY	Niceville		SHELTER	C	0.
106	SANTA ROSA MALL	300 MARY ESTHER BLVD	Mary Esther	850-244-2172	SHELTER	C	0.
107	ST. MARYS CATHOLIC CHURCH & SC	ROBINWOOD DR	Ft. Walton Beach	850-243-8913	SHELTER	C	2.
108	ST.PETERS CATHOLIC CHURCH'	100 FRANCIS ST	Mary Esther		SHELTER	C	0.
109	THE SHORES SHOPPING CENTER	U.S. HWY 98 & GULF SHORES BLVD	Destin		SHELTER	C	0.
110	YMCA	1127 HOSPITAL RD	Ft. Walton Beach	850-863-9622	SHELTER	C	0.
111	ADDIE LEWIS MIDDLE SCHOOL	281 MISSISSIPPI AVE	Valparaiso	850-833-3100	SCHOOL	C	0.
112	BAKER SCHOOL	1369 14TH ST	Baker	850-833-3100	SCHOOL	C	0.
113	BRUNER MIDDLE SCHOOL	322 NW HOLMES BLVD	Ft. walton Beach	850-833-3100	SCHOOL	C	0.
114	CHOCTAWHATCHEE HIGH SCHOOL	110 NW RACETRACK RD	Ft. Walton Beach	850-833-3100	SCHOOL	C	0.

Table 3-5 Okaloosa County Critical Facilities (con't)

NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	NFIP	CAT
115	CRESTVIEW HIGH SCHOOL	1304 FERDON BLVD	Crestview	850-833-3100	SCHOOL	C	0.
116	FIRST BAPTIST CHURCH OF VALPAR	444 VALPARAISO PKY	Valparaiso	850-678-4822	SCHOOL	C	0.
117	LAUREL HILL VFD	8209 HWY 85 N	Laurel Hill	850-652-4488	FIRE DEPARTMENT	C	0.
118	LAUREL HILL CITY HALL	8209 HWY 85 N	Laurel Hill		GOVERNMENT BUILDING	C	0.
119	LAUREL HILL SCHOOL	8078 4TH ST	Laurel Hill	850-833-3100	SCHOOL	C	0.
120	LONGWOOD ELEMENTARY	50 HOLLY DR	Ft. Walton Beach	850-833-3100	SCHOOL	C	0.
121	NICEVILLE HIGH SCHOOL	800 E JOHN SIMS PKY	Niceville	850-833-3100	SCHOOL	C	0.
122	SHALIMAR ELEMENTARY	1350 JOE MARTIN CR	Shalimar	850-833-3100	SCHOOL	C	0.
123	BLUEWATER BAY ELEMENTARY	4545 RANGE RD	Niceville	850-833-3100	SCHOOL	C	0.
124	FT WALTON BEACH MEDICAL CENTER	1000 MAR WALT DR	Ft. Walton Beach	850-863-7501	HOSPITAL	C	0.
125	911 Dispatch Ctr/EM North Command Post	2110 PJ adams Pky	Crestview	850-651-7150	EMERGENCY OPERATION CENTER	C	0.
126	Safe & Secure Respite Care	975 Airport Rd	Destin	850-654-5474	NURSING/CONVALESCENT	C	0.
127	Southside Baptist Church	951 S. Ferdon Blvd	Crestview	850-682-5525	SHELTER	C	0.
128	Radio Tower/Repeater Bldg	1250 N. Eglin Pky	Shalimar		COMMUNICATIONS	C	5.

Table 3-6 Walton County Critical Facilities

NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	NFIP	CAT
1	WALTON COUNTY EMERGENCY OPERATIONS CTR.	75 S DAVIS LN	DEFUNIAK SPRINGS	850-892-8065	EMERGENCY OPERATIONS CENTER	C	0.
2	CHILDREN AND FAMILY SERVICES	79 N. DAVIS LN	DEFUNIAK SPRINGS	850-892-8653	FOOD STAMPS/AID/MEDICAID	C	0.
3	WALTON COUNTY PUBLIC HEALTH UNIT	493 N 9TH ST	DEFUNIAK SPRINGS	904-892-8027	MEDICAL FOR SPECIAL NEEDS SHEL	C	0.
4	WALTON MIDDLE SCHOOL	625 PARK AVE	DEFUNIAK SPRINGS	904-892-8220	SHELTER - BACKUP/SECONDARY	C	0.
5	WALTON COUNTY COUNCIL ON AGING	1145 BALDWIN AVE	DEFUNIAK SPRINGS	904-892-2319	FEED/SHELTER ELDERLY	C	0.
6	FREEPORT ELEMENTARY SCHOOL	US HIGHWAY 331 SOUTH	FREEPORT	850-835-4700	SHELTER - BACKUP/SECONDARY	C	0.
7	PAXTON HIGH SCHOOL		PAXTON	- -	SHELTER - PRIMARY	C	0.
8	DEFUNIAK SPRINGS POLICE DEPARTMENT	355 US HIGHWAY 90 EAST	DEFUNIAK SPRINGS	850-892-8513	POLICE DEPARTMENT	C	0.
9	MAUDE SAUNDERS ELEMENTRY SCHOOL	416 JOHN BALDWIN ROAD	DEFUNIAK SPRINGS	850-892-2601	SHELTER - PRIMARY	C	0.
10	COPE CENTER PROFESSIONAL GROUP HOME	4253 US HWY 331 SOUTH	DEFUNIAK SPRINGS	850-892-8055	SHELTER - SPECIAL NEEDS	C	0.
11	WALTON REGIONAL HOSPITAL	336 COLLEGE AVE	DEFUNIAK SPRINGS	850-892-5171	HOSPITAL/MAJOR MEDICAL	C	0.
12	WALTON COUNTY CONVALESCENT CENTER	785 S. 2ND ST	DEFUNIAK SPRINGS	850-892-2176	NURSING/CONVALESCENT HOME	A	0.
13	FREEPORT HIGH SCHOOL	360 KYLEA LAIRD DR	FREEPORT	850-835-4212 /4222	SHELTER - PRIMARY	C	0.
14	WEST DEFUNIAK ELEMENTRY	815 LINCLON AVE	DEFUNIAK SPRINGS	850-892-5283	SHELTER - PRIMARY	C	0.
15	DEFUNIAK SPRINGS CIVIC CENTER	361 N. 10TH ST	DEFUNIAK SPRINGS	850-892-8500	SHELTER - SPECIAL NEEDS	C	0.
16	CITY OF DEFUNIAK SPRINGS WELL #1 & 3	11TH STREET AT WEST MAIN AVENUE	DEFUNIAK SPRINGS	850-893-8537	WELL HEAD	A	0.
17	CITY OF DEFUNIAK SPRINGS WELL #5	WALTON ROAD	DEFUNIAK SPRINGS	850-892-8537	WELL HEAD	C	0.
18	WALTON SENIOR HIGH SCHOOL		DEFUNIAK SPRINGS	850-892-8203	SHELTER - PRIMARY	C	0.
19	CITY OF DEFUNIAK SPRINGS WELL #2	BALDWIN AVENUE AT CITY HALL RD	DEFUNIAK SPRINGS	850-892-8537	WELL HEAD	C	0.
20	WALTON COUNTY SHERIFF'S DEPARTMENT	72 N. 6TH STREET	DEFUNIAK SPRINGS	850-892-8186	SHERIFF DEPARTMENT	C	0.

Table 3-6 Walton County Critical Facilities (con't)

NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	NFIP	CAT
21	CITY OF DEFUNIAK SPRINGS WWTP	209 NORTH FOURTH STREET	DEFUNIAK SPRINGS	850-892-8536	SEWAGE TREATMENT	C	0.
22	CITY OF FREEPORT WELL #3	15191 US HIGHWAY 331 S	FREEPORT	850-835-2822	POTABLE WATER DISTRIBUTION	C	0.
23	CITY OF FREEPORT WELL #2	432 MADISON	FREEPORT	850-835-2822	POTABLE WATER DISTRIBUTION	A	0.
24	CITY OF FREEPORT WWTP	718 EARL GODWIN ROAD	FREEPORT	850-892-2822	SEWAGE TREATMENT	C	0.
25	WALTON CORRECTIONAL INSTITUTE WWTP	692 WWII VETERANS LANE	DEFUNIAK SPRINGS	850-892-6141 X231	SEWAGE TREATMENT	C	0.
26	ARGYLE WATER WELL #1	149 OLD AIRPORT ROAD	DEFUNIAK SPRINGS	850-892-3299	POTABLE WATER DISTRIBUTION	C	0.
27	ARGYLE WATER WELL #2	129 SHELTER ROAD	DEFUNIAK SPRINGS	850-892-3299	POTABLE WATER DISTRIBUTION	C	0.
28	CITY OF PAXTON WELL #1	21872 US HIGHWAY 331 N	DEFUNIAK SPRINGS	850-834-2381	POTABLE WATER DISTRIBUTION	C	0.
29	CITY OF PAXTON WELL #2	109 BLUEBERRY DRIVE	PAXTON	850-834-2381	POTABLE WATER DISTRIBUTION	C	0.
30	CITY OF PAXTON WWTP	732 RICHERSON ROAD	PAXTON	850-834-2716	SEWAGE TREATMENT	C	0.
31	MOSSYHEAD WATER WORKS WELL #1	1485 CO HWY 1087	DEFUNIAK SPRINGS	850-892-1304	POTABLE WATER DISTRIBUTION	C	0.
32	MOSSYHEAD WATER WORKS WELL #2	6985 CO HWY 1087	DEFUNIAK SPRINGS	850-892-1304	POTABLE WATER DISTRIBUTION	C	0.

Table 3-7 Bay County Critical Facilities

NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
1	FLA002631	MILITARY PT. TYNDALL AFB	Panama City		SEWAGE TREAT 100,000+ GAL.	5.	C
2	FLA002551	SOLOMONS DRIVE	Panama City		SEWAGE TREAT 100,000+ GAL.	0.	AE
3	FL0020451	3601 W. 23RD ST.	Panama City		SEWAGE TREAT 100,000+ GAL.	5.	C
4	FL0021512	206 NORTH GULF BLVD.	Panama City Beach		SEWAGE TREAT 100,000+ GAL.	0.	C
5	FLA010008	JAN COOLEY DRIVE	BAY POINT		SEWAGE TREAT 100,000+ GAL.	5.	C
6	LISENBY HOSPITAL				HOSPITAL	4.	C
7	BAY MEMORIAL HOSPITAL				HOSPITAL	0.	C
8	OAK HILL COMMUNITY HOSPITAL				HOSPITAL	0.	C
9	ALLIED SIGNAL AUTOMOTIVE - BENDIX FRICTI	1006 ARTHUR DRIVE	Lynn Haven			1.	AE
10	ARIZONA CHEMICAL	2 EVERITT AVENUE	Panama City			0.	C
11	GULF COAST COMMUNITY HOSPITAL				HOSPITAL	5.	C
12	STONE CONTAINER	1 EVERITT AVENUE	Panama City			5.	C
13	MIDWEST PIPE COATING	1412 C AVE - PORT INDUSTRIAL PARK	Panama City			0.	C
14	COVE SCHOOL				SCHOOL	0.	C
15	DRUMMOND PARK SCHOOL				SCHOOL	5.	C
16	PANAMA CITY BEACH, C				WATER TREATMENT	0.	C
17	PANAMA CITY BEACH, C				WATER TREATMENT	0.	C
18	PANAMA CITY BEACH, C				WATER TREATMENT	0.	C
19	PANAMA CITY BEACH, C				WATER TREATMENT	0.	C
20	PANAMA CITY BEACH, C				WATER TREATMENT	4.	C
21	PANAMA CITY BEACH, C				WATER TREATMENT	4.	C
22	BAYSIDE PARK				WATER TREATMENT	1.	C
23	LYNN HAVEN, CITY OF				WATER TREATMENT	4.	C
24	LYNN HAVEN, CITY OF				WATER TREATMENT	4.	C
25	LYNN HAVEN, CITY OF				WATER TREATMENT	4.	C
26	LYNN HAVEN, CITY OF				WATER TREATMENT	4.	C
27	STONE CONTAINER, INC				WATER TREATMENT	5.	C
28	CEDAR GROVE WATER SY				WATER TREATMENT	0.	C
29	SPRINGFIELD, CITY OF				WATER TREATMENT	0.	A
30	PANAMA CITY WATER SY				WATER TREATMENT	0.	C

Table 3-7 Bay County Critical Facilities (con't)

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
31	PANAMA CITY WATER SY				WATER TREATMENT	0.	C
32	BAY COUNTY WATER SYS				WATER TREATMENT	0.	C
33	BAY COUNTY WATER SYS				WATER TREATMENT	0.	C
34	PARKER, CITY OF WATE				WATER TREATMENT	2.	AE
35	CALLAWAY, CITY OF WA				WATER TREATMENT	0.	C
36	HARDERS PARK WATER S				WATER TREATMENT	0.	C
37	WALLER ELEMENTARY SC				WATER TREATMENT	0.	C
38	MEXICO BEACH, TOWN O				WATER TREATMENT	3.	C
39	GLENWOOD SCHOOL				SCHOOL	4.	C
40	PANAMA CITY BEACH TRANSFER STATION				LAND FILL ACTIVE	0.	C
41	STEELFIELD ROAD LANDFILL				LAND FILL ACTIVE	0.	C
42	PANAMA CITY TRANSFER STATION				LAND FILL ACTIVE	0.	C
43	LYNN HAVEN C&D LANDFILL				LAND FILL ACTIVE	0.	C
44	M & O SANITATION, INC.				LAND FILL ACTIVE	0.	C
45	ARGUS SRVCS.,INC.-WEBB'S C&D				LAND FILL ACTIVE	0.	C
46	GULF ASPHALT CORP C&D FACILITY				LAND FILL ACTIVE	0.	C
47	AGGREGATE TRANSPORTATION				LAND FILL ACTIVE	0.	C
48	PITTS C & D FACILITY				LAND FILL ACTIVE	0.	C
49	FLA. ASPHALT PAVING CO. C&D FACIL.				LAND FILL ACTIVE	0.	C
50	GRICE'S SITE & EARTH DVLMPT C&D FAC				LAND FILL ACTIVE	0.	C
51	STEELFIELD ROAD C & D FACILITY				LAND FILL ACTIVE	0.	C
52	PANAMA CITY DISPOSAL, INC				LAND FILL ACTIVE	0.	C
53	ROLLING HILLS C & D LANDFILL				LAND FILL ACTIVE	0.	C
54	RAO & REDDY ASSOCIATES, MD, PA				LAND FILL ACTIVE	0.	A
55	NEW CREATION BUILDERS,INC				LAND FILL ACTIVE	5.	A
56	GULF ASPHALT CORPORATION				LAND FILL ACTIVE	0.	C
57	ADVANCED HOME HEALTH CARE, INC				LAND FILL ACTIVE	99.	99
58	BAY MEDICAL CENTER				LAND FILL ACTIVE	0.	C
59	HOSPICE/HOME HEALTH CARE				LAND FILL ACTIVE	0.	C
60	DISPOSAL DEPOT				LAND FILL ACTIVE	0.	C
61	BAY RESOURCE MANAGEMENT CENTER				LAND FILL ACTIVE	0.	C

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
62	JOHN A MULRENNAN., SR. RESEARCH LAB				LAND FILL ACTIVE	0.	AE
63	TYNDALL AFB	DEPT OF THE AF HDQRTS ADC			AIRPORT	0.	C
64	COASTAL SYSTEMS STATION	NAVAL COASTAL SYSTEMS CENTER		904-234-4288	HELIPORT	4.	C
65	COASTAL HELICOPTER CHARTER INC	6704 BAYOU GEORGE DR		904-769-6117	HELIPORT	0.	A
66	BAY HELICOPTERS	2506 JENKS AVE		904-769-0500	HELIPORT	0.	A
67	HELI-TECH INC	3601 FRANKFORD AVE.		904-763-9000	HELIPORT	2.	C
68	ROGERS INTERNATIONAL	3221 WEST HWY 390		904-763-7546	HELIPORT	5.	C
69	PANAMA CITY-BAY CO INTL	3173 AIRPORT RD, P O BOX A		904-763-6751	AIRPORT	4.	C
70	SEAWAYS SOUTH INC				SEAPLANE BASE	0.	C
71	GRAND LAGOON	6420 W HIGHWAY 98		904-871-2911	SEAPLANE BASE	1.	C
72	COASTAL HELICOPTERS INC	6704 BAYOU GEORGE DR	Panama City	904-769-6117	HELIPORT	0.	A
73	YELLOW WHIRLEY BIRD	422 LYNDELL LANE		904-235-2986	HELIPORT	0.	C
74	GULF COAST HELICOPTERS	3400 BRADENTON AVENUE		904-769-4926	HELIPORT	0.	C
75	SANDY CREEK AIR PARK	WEWA RT 75-1C		904-871-3221	AIRPORT	0.	C
76	CML	STAR ROUTE, BOX 135-B	VERNON	904-535-2401	AIRPORT	0.	C
77	INTERNATIONAL HELICOPTERS				HELIPORT	4.	C
78	BUCHANAN	130 EAST BALDWIN RD		904-769-9140	STOLPORT	4.	C
79	OAK GROVE SCHOOL				SCHOOL	0.	C
80	PANAMA SCHOOL				SCHOOL	0.	C
81	ROSENWALD HIGH SCHOOL				SCHOOL	0.	C
82	SAINT ANDREW SCHOOL				SCHOOL	4.	C
83	Adult Center				SCHOOL	4.	X500
84	TYNDALL SCHOOL				SCHOOL	4.	AE
85	TYNDALL SCHOOL				SCHOOL	0.	C
86	EXCEPTIONAL EDUCATION CENTER				SCHOOL	3.	C
87	MOWAT JUNIOR HIGH SCHOOL				SCHOOL	0.	C
88	MARGARET K LEWIS EXCEPTIONAL EDUCATION C				SCHOOL	0.	C
89	A D HARRIS SIXTH GRADE CENTER				SCHOOL	0.	C
90	A CRAWFORD MOSLEY HIGH SCHOOL				SCHOOL	0.	C
91	MAJETTE TOWER SLF (NORTH)				LAND FILL CLOSED	99.	99

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
92	BENNETT DUMP				LAND FILL CLOSED	0.	C
93	PANAMA CITY BEACH DUMP				LAND FILL CLOSED	0.	C
94	FOUNTAIN DUMP				LAND FILL CLOSED	0.	A
95	MEXICO BEACH DUMP				LAND FILL CLOSED	4.	C
96	SOUTHPORT DUMP				LAND FILL CLOSED	0.	C
97	WEST BAY DUMP				LAND FILL CLOSED	1.	AE
98	MAJETTE NORTH AND MAJETTE SOUTH SLF				LAND FILL CLOSED	0.	C
99	LYNN HAVEN DUMP				LAND FILL CLOSED	0.	C
100	SPRINGFIELD DUMP				LAND FILL CLOSED	1.	AE
101	SPRINGFIELD DUMP				LAND FILL CLOSED	5.	C
102	LYNN HAVEN VOLUME REDUCTION PLANT				LAND FILL INACTIVE	0.	A
103	PROPERTY NEAR HICKORY ST & SR22A				LAND FILL CLOSED	0.	C
104	PROPERTY NEAR IONIA ST & SR22A				LAND FILL CLOSED	0.	C
105	CENTURY BOAT - GENERAL MARINE	6725 BAYLINE DRIVE	Panama City			0.	C
106	LOUISIANA PACIFIC	8731 STEELFIELD STREET	Panama City			0.	C
107	BAXTER WWTP - EL GOVERNOR MOTEL	HIGHWAY 386 NORTH	Mexico Beach			2.	A
108	SPURLIN INDUSTRIES	700 JACKSON WAY	Panama City			0.	C
109	NUGGET OIL - 22	6218 EAST HIGHWAY 98	Panama City			4.	C
110	NUGGET OIL - 23	1201 OHIO AVENUE (HIGHWAY 77)	Lynn Haven			99.	99
111	NUGGET OIL - 24	5 EAST 15 STREET	Panama City			0.	C
112	NUGGET OIL - 34	HIGHWAY 22 AND BUSINESS 98	Panama City			0.	C
113	NUGGET OIL - 37	5512 EAST HIGHWAY 22	Panama City			0.	C
114	FLORIDA ASPHALT PAVING	11732 GRIFFIN ROAD	Youngstown			0.	C
115	PARTHENON PRINTS	909 WEST 39 STREET	Panama City			4.	C
116	CITGO PETROLEUM - PANAMA CITY TERMINAL	122 SOUTH CENTER AVENUE	Panama City			0.	C
117	ST JOSEPH TELEPHONE AND TELEGRAPH	7816 US HIGHWAY 98	Panama City			0.	C
118	BERG STEEL PIPE	1415 C AVENUE PORT INDUSTRIAL PARK	Panama City			3.	C
119	CITY OF PANAMA CITY BEACH - WELL 5	198 LANTANA STREET	Panama City			0.	C
120	CITY OF PANAMA CITY BEACH - WELL 6	99 SOUTH GULF BOULEVARD	Panama City			5.	A

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
121	CITY OF PANAMA CITY BEACH - WELL 9	16200 MANDY LANE	Panama City			4.	C
122	CITY OF PANAMA CITY BEACH - WELL 11	12200 BACK BEACH ROAD	Panama City			5.	C
123	GULF COAST COMMUNITY COLLEGE				SCHOOL	4.	C
124	PANAMA CITY MARINE INSTITUTE				SCHOOL	2.	C
125	KINDER CARE				SCHOOL	0.	C
126	COVENANT CHRISTIAN SCHOOL				SCHOOL	0.	C
127	CHRISTIAN CENTER ACADEMY				SCHOOL	99.	99
128	UNITED CEREBRAL PALSY SCHOOL OF PANAMA C				SCHOOL	5.	C
129	SAINT JOHN CATHOLIC SCHOOL				SCHOOL	0.	C
130	PANAMA CITY SEVENTH-DAY ADVENTIST SCHOOL				SCHOOL	0.	A
131	LEARNING TREE ONE CHILD DEVELOPMENT CENT				SCHOOL	0.	C
132	KINDER CARE LEARNING CENTER				SCHOOL	0.	A
133	HOLY NATIVITY GRADE SCHOOL				SCHOOL	0.	A
134	CENTRAL BAPTIST CHURCH SCHOOL				SCHOOL	0.	C
135	ACTION SPEAKS LEADERSHIP DEVELOPMENT CEN				SCHOOL	0.	C
136	Bay County Correctional Insti	2490 Industrial Drive	2490 Industrial D		Correctional Faci	0.	C
137	Juvenile Justice Detention Ce	450 East 11th St	450 East 11th St		Correctional Faci	0.	C
138	Juvenile Justice Boot Camp	456 East 11th St	456 East 11th St		Correctional Faci	0.	C
139	Bay Pines Mobile Home Park	5811 E. Highway 22	Callaway		Mobile_Homes	0.	C
140	Carriage Way	6000 Harvey St.	Callaway		Mobile_Homes	0.	C
141	Country Side Estates	11287 S. Gay Ave.	Callaway		Mobile_Homes	0.	C
142	Mayo's Mobile Home Park	150 Sims Avenue	Callaway		Mobile_Homes	0.	C
143	Mobile Home Gardens	238 Tyndall Parkway	Callaway		Mobile_Homes	0.	C
144	Pierce Trailer Rental	Sims Ave	Callaway		Mobile_Homes	0.	C
145	Pines Mobile Home Park	Nelle St. & Hwy 22	Callaway		Mobile_Homes	0.	C
146	The Oaks	Nebraska Street	Callaway		Mobile_Homes	0.	C
147	S. Bell-Callaway	6609 St Road 22	Callaway		HazMat	0.	C
148	Callaway Fire Department	5708 Cherry St	Callaway		Fire Station	0.	C

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
149	Grimes Country Haus	703 Dogwood Way	Callaway	(850)87	Assisted Living	0.	C
150	Callaway Assembly of God Churc	5718 Cherry St	Callaway		Church	0.	C
151	Callaway United Methodist Chur	6619 Highway 22	Callaway		Church	0.	C
152	Carlisle Baptist Church	835 S. Berthe Av.	Callaway		Church	0.	C
153	Good Shepaerd Lutheran Church	929 S. Tyndall Pkwy	Callaway		Church	0.	C
154	Parkway Presbyterian Church	505 S. Tyndall Pkwy	Callaway		Church	0.	C
155	Callaway Assembly of God Churc	5718 Cherry St	Callaway		Church	0.	C
156	Life & Priase Assembly of God	615 N Tyndall Pkwy	Callaway		Church	0.	C
157	Victory Baptist Church	247 N Tyndall Pkwy	Callaway		Church	0.	C
158	First Pentecostal Church	179 N Tyndall Pkwy	Callaway		Church	0.	C
159	Cedar Grove Baptist Church	2608 E 15h St.	Cedar Grove		Church	0.	C
160	Family of God Worship Center	1139 Everitt Av	Cedar Grove		Church	0.	C
161	First Assembly of God	1701 N East Av.	Cedar Grove		Church	0.	C
162	Apostolic Pentecostal Church	2907 E 11th Ct.	Cedar Grove		Church	0.	C
163	Ammie's Mobile Home Park	2300 N. Sherman Ave.	Cedar Grove		Mobile_Homes	0.	C
164	Fountain House	17919 Hwy 231	Fountain	(850)72	Assisted Living	0.	A
165	Greater Deliverance	2525 E Baldwn Rd.	Hiland Park		Church	0.	C
166	Duvall Mobile Home Park	Back Beach Rd.	Laguna Beach		Mobile_Homes	0.	C
167	West End Fire department	221 Malaga Place	Laguna Beach		Fire Station	0.	C
168	Breckenwood Trailer Park	4513 Pipeline Road	Lynn Haven		Mobile_Homes	0.	C
169	Carla Lane Mobile Home Living	4512 Carla Lane	Lynn Haven		Mobile_Homes	0.	C
170	Country Pines Estates I	300 E. 25th St.	Lynn Haven		Mobile_Homes	0.	C
171	Lynn Haven Trailer Park	201 W 14th St.	Lynn Haven		Mobile_Homes	5.	C
172	Lynn Haven WTP1	825 Ohio Avenue	Lynn Haven		HazMat	4.	C
173	Lynn Haven WTP2	825 Ohio Avenue	Lynn Haven		HazMat	4.	C
174	S. Bell- Lynn Haven	812 Ohio Ave	Lynn Haven		HazMat	4.	C
175	Sand Hills Fire Department	Chief Johnny Wright	Lynn Haven		Fire Station	5.	C
176	Lynn Haven Villa	1825 Tennessee Avenue	Lynn Haven	(850)26	Assisted Living	5.	C
177	Summers Landing	615 Florida Avenue	Lynn Haven	(850)26	Assisted Living	4.	C
178	Discovery Time Ed. Center	916 W. 26th Street	Lynn Haven	(850)26	Child Care	0.	C
179	Discovery Time Day Camp	918 W. 26th Street	Lynn Haven	(850)26	Child Care	0.	C

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
180	First Step Child Dev. Center	105. 11 th Street	Lynn Haven	(850)26	Child Care	4.	C
181	Lynn Haven Child Care	1849 Virginia Ave	Lynn Haven		Child Care	2.	AE
182	Schelba's	1412 Alabama Ave	Lynn Haven		Child Care	4.	C
183	Stacey's Swingers Lynn Haven	513 Minnesota Ave	Lynn Haven		Child Care	4.	C
184	Toddler's Haven	2543 Johnson Drive	Lynn Haven		Child Care	0.	C
185	Mobile Home Park		Lynn Haven		Mobile_Homes	5.	C
186	Police/Fire		Lynn Haven		Fire Station	5.	C
187	Mobile Home Park		Lynn Haven		Mobile_Homes	0.	C
188	Animal Control Facility		Lynn Haven		Animal Related Facility	0.	C
189	Community Center		Lynn Haven			0.	AE
190	High Nelson Industrial Park		Lynn Haven			1.	AE
191	Community Center		Lynn Haven			0.	A
192	Christ Presbyterian Church	2900 Minnesota Av	Lynn Haven		Church	0.	C
193	First Assembly of God of Lynn	920 Florida Av	Lynn Haven		Church	4.	C
194	First Presbyterian Church of L	810 Georgia Av	Lynn Haven		Church	4.	C
195	Central Assembly of God Church	2731 S Highway 77	Lynn Haven		Church	0.	C
196	First Baptist Church of Lynn H	1005 Ohio Av.	Lynn Haven		Church	4.	C
197	New Hope Missionary Baptist Ch	1401 Iowa Av	Lynn Haven		Church	5.	C
198	Cook Memorial Baptist Church	4102 Highway 390	Lynn Haven		Church	5.	C
199	First Baptist Church of Lynn H	1005 Ohio Av	Lynn Haven		Church	4.	C
200	North Bay Baptist Church	1202 Virginia Av	Lynn Haven		Church	4.	C
201	Church of Christ of Lynn Haven	1316 illnois Av	Lynn Haven		Church	0.	C
202	Family Worship Center Church o	1118 Florida Av.	Lynn Haven		Church	4.	C
203	Lynn Haven Church of God	1417 Texas Av	Lynn Haven		Church	5.	C
204	Centeral Assembly of God Churc	2731 S Highway 77	Lynn Haven		Church	0.	C
205	Panama City Bay County Full Go	1502 40th Pl	Lynn Haven		Church	0.	C
206	Lynn Haven United Methodist Ch	108 E 9th St.	Lynn Haven		Church	4.	C
207	Campbell's Temple Holiness Chu	1414 Wisconsin Av	Lynn Haven		Church	5.	C
208	Christ Presbyterian Church	2900 Minnesota Av	Lynn Haven		Church	0.	C
209	BLUE WATER INN & MARINA	PO BOX 13593	Mexico Beach	904/648	Hotel/Motel	0.	C
210	BUENA VISTA MOTEL	PO BOX 13144	Mexico Beach	904/648	Hotel/Motel	0.	C

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211	DRIFTWOOD INN	PO BOX 13447	Mexico Beach	904/648	Hotel/Motel	0.	C
212	EL GOVERNOR MOTEL	PO BOX 13096	Mexico Beach	904/648	Hotel/Motel	0.	C
213	GULF VIEW MOTEL	PO BOX 13183	Mexico Beach	904/648	Hotel/Motel	0.	C
214	SANDMAN MOTEL	PO BOX 13374	Mexico Beach	904/648	Hotel/Motel	0.	C
215	SURFSIDE INN MOTEL & APTS	PO BOX 13776	Mexico Beach	904/648	Hotel/Motel	0.	C
216	Azalea Coach Estates	611 West 14th Street	Panama City		Mobile_Homes	5.	C
217	A D Beck Mobile Home Park	6600 Cherry St.	Panama City		Mobile_Homes	0.	C
218	Adams Mobile Home Park	5116 Thornton Lane	Panama City		Mobile_Homes	5.	C
219	Al Harlen Rentals	2521 Michigan Ave.	Panama City		Mobile_Homes	2.	C
220	Allermas Mobile Home Park	2412 Lauire Ave.	Panama City		Mobile_Homes	5.	C
221	Anchorage Mobile home Park	4302 W. 19th St.	Panama City		Mobile_Homes	4.	C
222	Anderson Trailer Park	5102 E. 12th St.	Panama City		Mobile_Homes	0.	C
223	Bay Oaks Mobile Home Park	1024 Pitts Ave.	Panama City		Mobile_Homes	5.	C
224	Brannon's Mobile Home Park	2507 Drummond Ave.	Panama City		Mobile_Homes	3.	C
225	Brock Mobile Home Park	1212 Ethlyn Road	Panama City		Mobile_Homes	0.	C
226	Buena Vista Mobile Home Park	1320 Buena Vista Blvd.	Panama City		Mobile_Homes	0.	C
227	Busy Bee Mobile Home Park	7100 Cherry St.	Panama City		Mobile_Homes	0.	C
228	Cedar Grove Adult Mobile Home	1836 East Avenue	Panama City		Mobile_Homes	0.	C
229	Cherokee Landing	10035 Hwy 2301	Panama City		Mobile_Homes	0.	C
230	Circle J. Trailer Court	607 W. 11th St.	Panama City		Mobile_Homes	0.	C
231	Country Pines Estates Ii	3120 Minnesota Ave.	Panama City		Mobile_Homes	0.	C
232	Countryside Properties of N. F	3226Transmitter Rd.	Panama City		Mobile_Homes	0.	C
233	Douglas Road Mobile Home Park	2318 S. Dale Avenue	Panama City		Mobile_Homes	0.	C
234	Edna's Trailer Park	821 Transmitter Rd.	Panama City		Mobile_Homes	0.	C
235	Flamingo Court	2607 Grant Ave.	Panama City		Mobile_Homes	0.	X500
236	Florida Pines Mobile Home Park	3500 Florida Ave.	Panama City		Mobile_Homes	3.	C
237	George Martin	3424 E 15th St.	Panama City		Mobile_Homes	0.	C
238	Gulf Breeze Trailer Park	1532 June Ave.	Panama City		Mobile_Homes	0.	C
239	Isle of View Mobile Home Park	518 E. Everitt Ave.	Panama City		Mobile_Homes	0.	C
240	Jeanette's Mobile Home Park	4400 W. Hwy 98	Panama City		Mobile_Homes	0.	C
241	Jerry Pybus Rentals	11005 Old Bicycle Road	Panama City		Mobile_Homes	4.	C
						5.	A

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242	Johnson Mobile Home Park #5	1109 E 24th Plaza	Panama City		Mobile_Homes	0.	C
243	Johnsons Trailer Park #1	2326 Canal Ave.	Panama City		Mobile_Homes	0.	A
244	Johnsons Trailer Park #2	2356 Douglas Rd.	Panama City		Mobile_Homes	0.	C
245	Johnsons Trailer Park #3	2333 Douglas Rd.	Panama City		Mobile_Homes	0.	C
246	Landever Mobile Estates	420 N. Kimbrel Avenue	Panama City		Mobile_Homes	0.	C
247	Legear's Trailer Park	511 E 23rd Street	Panama City		Mobile_Homes	0.	C
248	Lindsey Trailer Park	4603 Hwy 231	Panama City		Mobile_Homes	0.	C
249	Luvena W. Miller	6001 Hwy 231	Panama City		Mobile_Homes	0.	A
250	Mceachins Rentals II	3307 Baldwin Rd.	Panama City		Mobile_Homes	0.	C
251	Millville Trailer Court	400 East Ave.	Panama City		Mobile_Homes	0.	C
252	Moore's Trailer Park	1026 E. 24th Plaza	Panama City		Mobile_Homes	0.	C
253	Norma Shiver	3700 E. 13th St.	Panama City		Mobile_Homes	0.	C
254	Panama City Mobile Home Estate	700 Transmitter Rd.	Panama City		Mobile_Homes	0.	C
255	Paradise Trailer Park	5612 E. Hwy 98	Panama City		Mobile_Homes	0.	C
256	Ralph's Rentals	5123 E. 4th Street	Panama City		Mobile_Homes	0.	C
257	Robinsons Trailer park	6000 E Hwy 98	Panama City		Mobile_Homes	2.	C
258	Sappy Lane Trailer Park	5100 East 7th St. Lot #	Panama City		Mobile_Homes	0.	C
259	Shady Oaks Mobile Home Park	750 S Hwy 22-A	Panama City		Mobile_Homes	0.	C
260	Sherman Pines Mobile Home Park	1940 Sherman Avenue	Panama City		Mobile_Homes	0.	C
261	Smugglers Cove	5664 E. Hwy 98	Panama City		Mobile_Homes	0.	C
262	Springway Mobile Home Park	149 S. Sims Ave.	Panama City		Mobile_Homes	0.	C
263	St. Andrew Mobile Home Park	1236 Beck Ave.	Panama City		Mobile_Homes	2.	C
264	Sunset Trailer Park	2515 Laurie Ave.	Panama City		Mobile_Homes	5.	C
265	Taylor Mobile Home Park	4905 Alameda St.	Panama City		Mobile_Homes	0.	C
266	Tharp's Landing	4370 Huckleberry Lane	Panama City		Mobile_Homes	4.	C
267	Three Ninety Trailer Count	2710 E Hwy 390	Panama City		Mobile_Homes	0.	C
268	Waldrop Mobile Home Park	5000 W. 18th St.	Panama City		Mobile_Homes	4.	C
269	Walsh's Mobile Home Park	1800 East Ave.	Panama City		Mobile_Homes	0.	C
270	BAY VILLA MOTEL	4501 W HIGHWAY 98	Panama City	904/785	Hotel/Motel	4.	C
271	BEST WESTERN INN	711 W BEACH DR	Panama City	904/763	Hotel/Motel	2.	C
272	BLUE BAY MOTOR LODGE	3407 W HIGHWAY 98	Panama City	904/785	Hotel/Motel	5.	C

Table 3-7 Bay County Critical Facilities (con't)

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
273	BUDGET INN	3910 W HIGHWAY 98	Panama City	904/785	Hotel/Motel	5.	C
274	CLASSIC INN	4903 W HIGHWAY 98	Panama City	904/769	Hotel/Motel	4.	C
275	DAYS INN	4111 W HIGHWAY 98	Panama City	904/784	Hotel/Motel	5.	C
276	ECONO LODGE	4411 W HIGHWAY 98	Panama City	904/785	Hotel/Motel	4.	C
277	EL PANAMA MOTEL	1131 HARRISON AVE	Panama City	904/763	Hotel/Motel	0.	C
278	FAIRWAY INN	3400 W HIGHWAY 98	Panama City	904/747	Hotel/Motel	5.	C
279	FARR INN	1306 BECK AVE	Panama City	904/769	Hotel/Motel	3.	C
280	HOWARD JOHNSON	4601 W HIGHWAY 98	Panama City	904/785	Hotel/Motel	4.	C
281	HOWARD'S MOTEL	4911 W HIGHWAY 98	Panama City	904/763	Hotel/Motel	4.	C
282	LEE'S MOTEL	1342 N COVE BLVD	Panama City	904/769	Hotel/Motel	0.	C
283	MARIE MOTEL	545 MAGNOLIA AVE	Panama City	904/763	Hotel/Motel	0.	C
284	PASSPORT INN	5003 W HIGHWAY 98	Panama City	904/769	Hotel/Motel	4.	C
285	RAMADA INN	3001 W 10TH ST	Panama City	904/785	Hotel/Motel	5.	C
286	RELAX INN	900 HARRISON AVE	Panama City	904/763	Hotel/Motel	0.	C
287	SCOTTISH INN	4907 W HIGHWAY 98	Panama City	904/769	Hotel/Motel	4.	C
288	STAR MOTEL	836 HARRISON AVE	Panama City	904/763	Hotel/Motel	0.	C
289	THRIFTY INN BY THE BAY	1212 BECK AVE	Panama City	904/785	Hotel/Motel	2.	C
290	TWEEN BAYS MOTEL	4508 W HIGHWAY 98	Panama City	904/763	Hotel/Motel	4.	C
291	VALU-LODGE	4810 W HIGHWAY 98	Panama City	904/784	Hotel/Motel	4.	C
292	EAGLE INN MOTEL	6319 E HIGHWAY 98	Panama City	904/871	Hotel/Motel	0.	C
293	JETAIRE MOTEL	6249 E HIGHWAY 98	Panama City	904/871	Hotel/Motel	0.	C
294	LA BRISA INN	5711 E HIGHWAY 98	Panama City	904/871	Hotel/Motel	0.	C
295	PARKER INN	4933 E HIGHWAY 98	Panama City	904/874	Hotel/Motel	0.	C
296	REBA MOTEL	323 S TYNDALL PKWY	Panama City	904/785	Hotel/Motel	0.	C
297	STACEY'S MOTEL	4636 E HIGHWAY 98	Panama City	904/871	Hotel/Motel	0.	C
298	BEST WESTERN INN	1035 E 23RD ST	Panama City	904/784	Hotel/Motel	0.	A
299	CANNON MOTEL & MOBILE HOME PK	2111 N HIGHWAY 231	Panama City	904/785	Hotel/Motel	0.	A
300	CLUBLIFE RESORTS INC	2639 LISENBY AVE	Panama City	904/784	Hotel/Motel	0.	C
301	COMFORT INN	1013 E 23RD ST	Panama City	904/769	Hotel/Motel	0.	A
302	HOLIDAY INN	2001 N COVE BLVD	Panama City	904/769	Hotel/Motel	0.	A
303	HOWARD JOHNSON	301 E 23RD ST	Panama City	904/872	Hotel/Motel	0.	A

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
304	SUPER 8 MOTEL	207 N HIGHWAY 231	Panama City	904/784	Hotel/Motel	0.	C
305	USA INN	710 E 15TH ST	Panama City	904/763	Hotel/Motel	0.	C
306	AMERICANA MOTEL	11807 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	AE
307	BARNEY GRAY MOTEL	10901 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
308	BEST WESTERN INN	11815 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	AE
309	CASA BLANCA RESORT	11115 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
310	CHATEAU MOTEL	12525 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	AE
311	COCONUT GROVE MOTOR INN	9725 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	C
312	EL-PINE MOTEL	8901 FRONT BEACH RD	Panama City Beach	904/235	Hotel/Motel	5.	C
313	GULF BREEZE MOTEL	10720 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
314	HOTEL CALIFORNIA	10624 FRONT BEACH RD	Panama City Beach	904/233	Hotel/Motel	4.	C
315	LA BRISA INN	9424 FRONT BEACH RD	Panama City Beach	904/235	Hotel/Motel	0.	C
316	LAMPLIGHTER INN	10714 FRONT BEACH RD	Panama City Beach	904/233	Hotel/Motel	4.	C
317	MC KENZIE INN	618 EVERGREEN ST	Panama City Beach	904/234	Hotel/Motel	0.	AE
318	MIRACLE STRIP BEACH MOTEL	11827 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	AE
319	OCEAN TOWERS BEACH CLUB	11211 FRONT BEACH RD	Panama City Beach	904/235	Hotel/Motel	4.	C
320	PAGE APARTMENTS	10625 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
321	PARK PLACE MOTEL & CAMPGROUND	9322 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	C
322	PLAZA MOTEL	12830 FRONT BEACH RD	Panama City Beach	904/233	Hotel/Motel	0.	AE
323	RAMADA INN	12907 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	AE
324	REEF MOTEL	12011 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
325	REST-A-WHILE MOTEL	613 EVERGREEN ST	Panama City Beach	904/234	Hotel/Motel	0.	C
326	ROYAL COURT MOTEL	9216 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	C
327	SIESTA MOTEL	9113 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	C
328	SPAIN APARTMENTS & COTTAGES	10621 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
329	SURF HIGH INN ON THE GULF	10611 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
330	TRADE WINDS MOTEL	12513 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	AE
331	TWIN PALMS MOTEL	10601 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
332	WATERS EDGE MOTEL	10995 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
333	ALTAN'S BEACH MOTEL & RSTRNT	5700 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
334	AQUA VIEW MOTEL	4909 HISPANIOLA AVE	Panama City	904/234	Hotel/Motel	4.	C

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335	BEACH HOUSE	8206 SURF DR	Panama City Beach	904/234	Hotel/Motel	4.	C
336	CLEOPATRA MOTEL	102 BEACH BLVD	Panama City Beach	904/234	Hotel/Motel	4.	C
337	COLONIAL SHORES CONDOMINIUM	8512 SURF DR	Panama City Beach	904/234	Hotel/Motel	4.	C
338	COMFORT INN	9600 S THOMAS DR	Panama City Beach	904/234	Hotel/Motel	4.	C
339	COMMODORE	4715 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
340	DORMAN COTTAGES	9708 BEACH BLVD	Panama City Beach	904/234	Hotel/Motel	4.	C
341	DUNES OF PANAMA MANAGEMENT INC	7205 THOMAS DR BLDG C	Panama City Beach	904/234	Hotel/Motel	4.	C
342	GRANDE GULF MOTEL	6014 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
343	GULF EDGE INN	9704 BEACH BLVD	Panama City Beach	904/234	Hotel/Motel	4.	C
344	GULFCREST MOTEL	8715 SURF DR	Panama City Beach	904/234	Hotel/Motel	4.	C
345	GULFGATE CONDOMINIUMS	8200 SURF DR	Panama City Beach	904/234	Hotel/Motel	4.	C
346	HOWARD JOHNSON	9400 S THOMAS DR	Panama City Beach	904/234	Hotel/Motel	4.	C
347	LAGOON MOTEL	5915 N LAGOON DR	Panama City	904/235	Hotel/Motel	2.	AE
348	MARINER WEST CONDOMINIUM ASSN	6213 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
349	MERRIMAC MOTEL	5301 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
350	MONTEREY MOTEL	5501 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
351	MOONSPINNER CONDOMINIUM ASSN	4425 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
352	PANA ROC MOTEL	5507 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
353	PANAMA PALMS	5607 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
354	PELICAN II	9718 THOMAS DR	Panama City Beach	904/235	Hotel/Motel	4.	C
355	PIER 99 BEACHFRONT MOTEL	9900 S THOMAS DR	Panama City Beach	904/234	Hotel/Motel	4.	C
356	PRIDE RESORTS	1219 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
357	REGENCY TOWERS	5801 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
358	SEA FOAM MOTEL	6010 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
359	SEA OATS MOTEL	8708 SURF DR	Panama City Beach	904/233	Hotel/Motel	4.	C
360	SEA SIDE VILLAS	4701 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
361	SPARTAN INN	8614 SURF DR	Panama City Beach	904/234	Hotel/Motel	4.	C
362	SPYGLASS INN	5004 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
363	SUMMERHOUSE	6505 THOMAS DR	Panama City Beach	904/234	Hotel/Motel	4.	C
364	SUN-GLO MOTEL	5401 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
365	SUNSET INN	8109 SURF DR	Panama City Beach	904/234	Hotel/Motel	4.	C

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366	SUNSHINE SHORES CONDOMINIUM	5323 THOMAS DR	Panama City	904/234	Hotel/Motel	4.	C
367	SURF N SAND	7816 SURF DR	Panama City Beach	904/234	Hotel/Motel	4.	C
368	THOMAS DRIVE SPORTSMANS MOTEL	2703 THOMAS DR	Panama City	904/235	Hotel/Motel	3.	C
369	TREASURE ISLAND MOTEL	5005 GULF DR	Panama City	904/234	Hotel/Motel	4.	AE
370	BAY POINT REAL ESTATE CO	PO BOX 28239	Panama City	904/235	Hotel/Motel	4.	C
371	AMBASSADOR BEACH CONDOMINIUM	15617 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	C
372	BEST WESTERN INN	13615 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	AE
373	BLUE DOLPHIN BEACH RESORT	19919 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	VE
374	BRIGHT STAR MOTEL	14705 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
375	CATALINA COURT	19988 FRONT BEACH RD	Panama City Beach	904/233	Hotel/Motel	0.	VE
376	CHAR-BETT MOTEL	291 S HIGHWAY 79	Panama City Beach	904/234	Hotel/Motel	0.	C
377	CONTINENTAL CONDOMINIUMS	15413 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
378	DESERT PALMS MOTEL	17729 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	VE
379	DRIFTWOOD LODGE	15811 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	C
380	EMERALD BEACH MOTEL INC	14701 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	C
381	FIESTA MOTEL	13623 FRONT BEACH RD	Panama City Beach	904/235	Hotel/Motel	0.	AE
382	FLAMINGO DOME BY THE SEA	15525 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
383	FLORIDA PALMS MOTEL	17784 FRONT BEACH RD	Panama City Beach	904/233	Hotel/Motel	5.	VE
384	FONTAINEBLEAU TERRACE	14401 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
385	GEORGIAN TERRACE MOTEL	14415 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
386	GULF VIEW MOTEL	14501 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
387	HOLLOWAY HOUSE MOTEL	15405 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
388	HORIZON SOUTH II	17462 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	VE
389	IMPALA MOTEL	17751 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	VE
390	JUNGLE BEACH RETREAT	15325 FRONT BEACH RD	Panama City Beach	904/233	Hotel/Motel	0.	C
391	KISKA COURT	22209 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
392	LAGUNA BEACH CHRISTIAN RETREAT	20016 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	VE
393	MARK II BEACH RESORT	15285 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
394	NAUTICUS BEACH MOTEL	22217 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
395	OSPREY MOTEL	15801 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	C
396	PINNACLE PORT	23223 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C

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397	PORT OF CALL HOTEL	15817 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	C
398	RIVIERA MOTEL	21504 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	AE
399	SANDMAN BEACH MOTEL APARTMENTS	108 CASA PL	Panama City Beach	904/234	Hotel/Motel	0.	AE
400	SANDPIPER-BEACON MOTEL	17403 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	VE
401	SEA BREEZE MOTEL	16810 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	AE
402	SEA WITCH MOTEL CO	21905 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	AE
403	SEA-VIEW MOTEL	128 LAKE PL	Panama City Beach	904/234	Hotel/Motel	4.	C
404	SEACHASE CONDOMINIUMS	17351 FRONT BEACH RD	Panama City Beach	904/235	Hotel/Motel	0.	VE
405	SEAKOVE MOTEL	17851 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	VE
406	SEASCAPE INN	15505 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
407	SHALIMAR PLAZA MOTEL	17545 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	VE
408	SKYWAY MOTEL	16801 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	AE
409	SOUTH PACIFIC MOTEL	16701 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	AE
410	SUGAR SANDS MOTEL	20723 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	VE
411	SUN DIAL MOTEL	15625 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	C
412	SUNNYSIDE BEACH & TENNIS CONDO	22400 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
413	TRIPS MOTEL	14929 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	C
414	WALLACE HOWELL COTTAGES	22026 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
415	WIND DRIFT MOTEL	14521 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
416	WISTERIA INN	20404 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	VE
417	WYE MOTEL	258 S HIGHWAY 79	Panama City Beach	904/235	Hotel/Motel	0.	C
418	BOARDWALK BEACH RESORT & CTR	PO BOX 9170	Panama City Beach	904/234	Hotel/Motel	4.	C
419	EDGEWATER BEACH RESORT	PO BOX 9850	Panama City Beach	904/235	Hotel/Motel	4.	C
420	HOLIDAY INN	PO BOX 18049	Panama City Beach	904/234	Hotel/Motel	4.	C
421	Air Products	1601 Florida Ave	Panama City		HazMat	0.	C
422	AT&T	111 East 5th Street	Panama City		HazMat	2.	C
423	Bay County WWTP/Cherry St Sewe	3642 Cherry St	Panama City		HazMat	0.	C
424	Bay County WTP	3400 Transmitter Rd	Panama City		HazMat	0.	C
425	Bay Resource Mag	7504 U.S. Highway 231	Panama City		HazMat	0.	C
426	Kmart	1329 west 15th St	Panama City		HazMat	0.	C
427	PC WWTP St Andrew	3601 W 23rd Street	Panama City		HazMat	4.	C

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
428	PC WWTP-Millville	1800 East third St	Panama City		HazMat	2.	AE
429	Southern Bell P.C.	111 East 5th Street	Panama City		HazMat	2.	C
430	Fire Administration	644 Mulberry Avenue	Panama City		Fire Station	3.	C
431	Hiland Park Fire Department	2837 N. Panama Avenue	Panama City		Fire Station	0.	A
432	Northwest Side Fire Department	3923 West 21st St	Panama City		Fire Station	5.	C
433	Blue Haven Retirement Center	2734 E Hwy 390	Panama City	(850)26	Assisted Living	0.	C
434	Cove Manor	521 E. Beach Dr	Panama City	(850)76	Assisted Living	2.	C
435	Lisenby Retirement	1400 W 11th Street	Panama City	(850)78	Assisted Living	0.	C
436	DaySpring Retirement Center,	2906 Cocoa Avenue	Panama City	(850)76	Assisted Living	0.	C
437	Mary Ella Villa	526 N Mary Ella	Panama City	(850)87	Assisted Living	0.	C
438	Robinson Residential Care	11921 Caruso Drive	Panama City	(850)87	Assisted Living	0.	C
439	The Retirement Center	1313 E 11 Street	Panama City	(850)78	Assisted Living	0.	C
440	Bay Medical Child Care	511 Palo Alto Drive	Panama City	(850)79	Child Care	0.	C
441	Callaway Child Care	6930 Highway 22	Panama City	(850)87	Child Care	0.	C
442	Cherry Tree Day Care	5311 Highway 22	Panama City	(850)78	Child Care	0.	C
443	Creative Learning	2801 W. 14th Street	Panama City	(850)78	Child Care	5.	C
444	Early Education Headstart	1241 N. East Avenue	Panama City	(850)87	Child Care	0.	C
445	First Baptist Child Care	First Baptist Child Car	Panama City	(850)76	Child Care	0.	C
446	Celebration Christian Academy	900 Transmitter Road	Panama City	(850)78	Child Care	0.	C
447	Childworld Learning Center	3430 Hwy 390	Panama City	(850)78	Child Care	0.	C
448	Early Childhood Headstart II	1215 East Avenue	Panama City		Child Care	0.	C
449	Early Education III	1241 N. East Avenue	Panama City	(850)87	Child Care	0.	C
450	First United Methodist Child	903 East 4th Street	Panama City	(850)76	Child Care	0.	C
451	First United Methodist Church	903 East 4th Street	Panama City	(850)76	Child Care	0.	C
452	Good Shepard Lutheran	929 S. Tyndall Pkwy	Panama City	(850)87	Child Care	0.	C
453	Happy Days Child Care	2724 East 17th Street	Panama City		Child Care	0.	C
454	Harvest Christian Childcare	3238 East HWY 390	Panama City		Child Care	0.	C
455	Holy Nativity Episcopal	222 N. Bonita	Panama City		Child Care	0.	C
456	Kidd's Dale Day Care	700-A Transmitter Rd	Panama City		Child Care	0.	C
457	Life Management of N/W Florid	525 West 15th St	Panama City		Child Care	0.	C
458	LIL Angels I	5824 East Cherry St #	Panama City		Child Care	0.	C

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459	Massalina Head Start	806 Frank Nelson Dr	Panama City		Child Care	0.	C
460	North Bay Learning Center	2315 Ruth Hentz Dr	Panama City		Child Care	5.	C
461	Palo Alto Child Care Center	3119 HWY 231	Panama City		Child Care	0.	C
462	Panama Christian School	1104 Balboa Avenue	Panama City		Child Care	0.	A
463	Pat's Child Care	2002 Clay Ave.	Panama City		Child Care	0.	C
464	Phoenix Preschool #106	5705 Hickory Street	Panama City		Child Care	0.	C
465	Phoenix Preschool #205	1338 Florida Ave	Panama City		Child Care	0.	C
466	Pon's Child Care	2626 Jenks Ave	Panama City		Child Care	0.	A
467	Pon's Too Child Care	2626 Jenks Ave	Panama City		Child Care	0.	A
468	Quality Learning Child Care	1123 School Ave	Panama City		Child Care	0.	C
469	Quality Learning II	257 N HWY 22-a	Panama City		Child Care	0.	C
470	Sea Horse Academy	117-A N. HWY 22 A	Panama City		Child Care	0.	C
471	Saint Andrews Baptist Child	3010 W. 15th St	Panama City		Child Care	5.	C
472	St. John's After School	1005 Fortune Ave	Panama City		Child Care	0.	C
473	St. John's Catholic School	1005 Fortune Ave	Panama City		Child Care	0.	C
474	Teen Parenting Center	3016 HWY 77	Panama City		Child Care	0.	C
475	United Cerebral Palsy of N/W	621 Kraft Ave	Panama City		Child Care	0.	C
476	Vetter Head Start	709 E. 7th Court	Panama City		Child Care	0.	C
477	Watch Me Grow Child Care Cntr	3120 W. 23rd St	Panama City		Child Care	5.	C
478	White House Academy	2618 W. 10th St.	Panama City		Child Care	5.	C
479	Bay Convalescent and Rehab	1336 St. Andrews Bl	Panama City		Nursing Home	5.	A
480	Bay Crest Nursing Center	3611 Transmitter	Panama City		Nursing Home	0.	C
481	Gulf Coast Convalescent Cente	1937 Jenks Avenue	Panama City		Nursing Home	0.	A
482	Lisenby On Lake Caroline	1400 W. 11th Streer	Panama City		Nursing Home	0.	C
483	Nat'l Healthcare of Panama Ci	2100 Jenks Ave	Panama City		Nursing Home	0.	A
484	Panama City Nursing Center	924 W. 13th Street	Panama City		Nursing Home	0.	C
485	Wagner Rehab and Nursing	3409 W. 19th Street	Panama City		Nursing Home	5.	C
486	Public Works Maintenance Complex	731 Massalina Dr.	Panama City			0.	C
487	Millville Wastewater Treatment	1800 E. 3rd St	Panama City			2.	AE
488	St. Andrews Wastewater Treatme	226 Michigan Ave	Panama City		Sewage Treatment	0.	C
489	Utility Department Maintenance	3000 W. 19th St.	Panama City			5.	C

Table 3-7 Bay County Critical Facilities (con't)

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
490	St. Andrews Marina	3151 W. 10th St	Panama City			2.	AE
491	Panama City Marina		Panama City			0.	C
492	City Hall	9 Harrison Ave	Panama City			3.	C
493	Police Sub-Station	261 Everitt Ave	Panama City		Police	0.	C
494	Police Sub-Station	1025 Everitt Ave	Panama City		Police	0.	C
495	Police Sub-Station	1404 B N. Palo Alto Ave	Panama City		Police	0.	C
496	Police Sub-Station	1701 Hamilton Ave	Panama City		Police	0.	C
497	Police Sub-Station	455 Grace Ave	Panama City		Police	3.	C
498	Police Sub-Station	1722 W. 17th St.	Panama City		Police	0.	C
499	Police Sub-Station	1000 Beck Ave	Panama City		Police	5.	C
500	FireStation Num2	2001 beck Ave	Panama City		Fire Station	5.	C
501	FireStation Num4	Jenks and 19th	Panama City		Fire Station	0.	A
502	FireStation Num1	600 East Business Hwy 9	Panama City		Fire Station	3.	C
503	FireStation Num3	Sherman and 6th St	Panama City		Fire Station	0.	C
504	FireStation Training Goun	2003 Beck Ave	Panama City		Fire Station	0.	C
505	FireStation Num5	Jackson Way	Panama City		Fire Station	5.	C
506	Bear Creek Assembly of God	N. Bear Creek Rd.	Panama City		Church	0.	A
507	Christ Unity Church	513 Satsuma Av	Panama City		Church	3.	AE
508	Christian Church at Panama Cit	1814 St. Andrews Blvd.	Panama City		Church	0.	C
509	Church of Christ-Glenwood	708 E 13th St.	Panama City		Church	0.	C
510	Church of God in Christ Antioc	3501 E 2nd St.	Panama City		Church	0.	C
511	Church with The Roar	1616 Allison Av	Panama City		Church	5.	C
512	Cove Baptist Church	100 N Mac Arthur Av	Panama City		Church	0.	C
513	Covenant Presbyterian Church	2350 Frankford Av	Panama City		Church	0.	C
514	Emmaus United Methodist Church	1206 County Rd. 2297	Panama City		Church	0.	C
515	Family of God Baptist Church	901 E. Business Highway	Panama City		Church	0.	C
516	Good Shephard Church of God	2810 Frankford Av	Panama City		Church	5.	C
517	Gospel Temple UAFB Church	1707 N Palo Alto Av	Panama City		Church	0.	C
518	Grace Baptist Church	2745 Highway 77	Panama City		Church	0.	A
519	Grace Presbyterian Church	1415 Airport Rd.	Panama City		Church	0.	C
520	Gulfview United Methodist Chur	232 Rose Ln Lag Bch	Panama City		Church	0.	C

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
521	Harvest Worship Center	3238 E Hghway 390	Panama City		Church	0.	C
522	Hiland Park Baptist Church	2611 Highway 231	Panama City		Church	0.	C
523	Hiland Park Baptist Church	2611 Highway 231	Panama City		Church	0.	C
524	Iiglesia Independiente Cristia	1713 Beck Av	Panama City		Church	5.	C
525	Jenks Avenue Church of Christ	3332 Jenks Av.	Panama City		Church	0.	C
526	Messiah Lutheran Church EL CA	23rd St. & Stanford Rd	Panama City		Church	0.	C
527	New Beginnings Assembly of the	662 Cone Av	Panama City		Church	0.	C
528	Northwest Coast Baptist Assoc	2335 Industrial Dr.	Panama City		Church	0.	A
529	Parker United Methodist Church	908 S Tyndall Pkwy	Panama City		Church	0.	C
530	Parkway Church of the Nazarene	162 N. Tyndall Pkwy	Panama City		Church	0.	C
531	St. Andrew Assembly of God	2400 W. 15th St.	Panama City		Church	5.	C
532	Saint Andrew Baptist Church Pa	3010 W 15th St.	Panama City		Church	5.	C
533	Saint Andrew United Methodist	2001 W 11th St.	Panama City		Church	0.	C
534	St. Andrew's Episcopal Church	Office 1608 Baker Court	Panama City		Church	0.	C
535	St. John Missionary Baptist Ch	1021 Martin Luther King	Panama City		Church	0.	C
536	St. John the Theologian Creek	136 W. Baldwin Rd.	Panama City		Church	0.	C
537	St. Thomas by the sea Episcopa	Wisteria Lane Lag Bch	Panama City		Church	0.	C
538	The Rock	2413 N Harris Av	Panama City		Church	0.	C
539	Millville Advent Christian Chu	2220 E 3rd St.	Panama City		Church	0.	C
540	Greater Bethel African Methodi	829 Hamilton Av.	Panama City		Church	0.	C
541	Mount Olive AME Church	161 Flower Av	Panama City		Church	0.	C
542	St. James AME Church	1807 E 7th St.	Panama City		Church	0.	C
543	St. Michael and All Angels Ang	711 Venetian Way	Panama City		Church	0.	C
544	Bayou George Assembly of God C	5715 Highway 231	Panama City		Church	0.	C
545	Bayou George Calvary Temple As	8106 Highway 2301	Panama City		Church	0.	C
546	Bear Creek Assembly of God	N Bear Creek Rd.	Panama City		Church	0.	C
547	East Side Assembly of God	3610 E 14th St.	Panama City		Church	0.	C
548	Fountain first Assembly of God	18190 Railroad Av Fount	Panama City		Church	0.	C
549	Central Baptist Church	1104 Balboa Ave.	Panama City		Church	0.	A
550	First Baptist Church of Panama	32 W. 6th St.	Panama City		Church	0.	C
551	Immanuel Baptist Church	216 College Av	Panama City		Church	0.	C

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
552	Macedonia Baptist Church	715 N Cove Blvd	Panama City		Church	0.	C
553	Mount Calvary Baptist Church	1047 E 13th Ct.	Panama City		Church	0.	C
554	Mt. olive Missionary Baptist c	719 E 13th Ct	Panama City		Church	0.	C
555	New Gulf Coast Baptist Associa	Merrit Rd. Fountain	Panama City		Church	0.	C
556	New Judson Baptist Church	717 E 7th Ct	Panama City		Church	0.	C
557	Northside Baptist Church	530 Airport Rd.	Panama City		Church	0.	A
558	St. Luke Baptist Church	1500 Fountain Av	Panama City		Church	0.	C
559	2nd Mt. Moriah Baptist Church	3808 E 1st Ct	Panama City		Church	5.	C
560	Tabernacle Baptist Church	1204 N Palo Alto Av	Panama City		Church	5.	C
561	Calvary Baptist Church	1529 Mulberry Av.	Panama City		Church	0.	C
562	First Free Will Baptist Church	305 Airport Road	Panama City		Church	0.	A
563	East Side Baptist Church	236 Kraft Av	Panama City		Church	0.	C
564	Fellowship Baptist Church	2501 Michigan Av	Panama City		Church	2.	C
565	Galilean Baptist Church	6008 John Pitts Rd.	Panama City		Church	0.	C
566	Parkway Baptist Church	3323 E 15th St.	Panama City		Church	0.	C
567	St. Andrew Primitive Baptist C	2100 Michigan Av.	Panama City		Church	5.	C
568	Greater Friendship Baptist Chu	909 E 8th St.	Panama City		Church	0.	C
569	New Bethel Baptist Church	1942 E 7th St.	Panama City		Church	0.	C
570	Brannonville Baptist Church	4113 Barber St.	Panama City		Church	0.	C
571	East Bay Baptist Church	508 Hisgway 2297	Panama City		Church	0.	C
572	First Baptist Church of Bayou	6227 Highway 2301	Panama City		Church	0.	C
573	First Baptist Church of Callaw	6930 E Hwy 22	Panama City		Church	0.	C
574	First Baptist Church of Deerpo	5940 Highway 2311	Panama City		Church	0.	C
575	First Baptist Church of Founta	Highway 231 Fountain	Panama City		Church	0.	C
576	First Baptist Church of Panama	32 W 6th ST.	Panama City		Church	0.	C
577	First Baptist Church of Panama	601 Grace Av.	Panama City		Church	0.	C
578	First Baptist Church of Parker	4630 E. Business Highwa	Panama City		Church	0.	C
579	Immanuel Baptist Church	216 College Av.	Panama City		Church	0.	C
580	Northside Baptist Church	530 Airport Rd.	Panama City		Church	0.	A
581	Northwest Coast Baptist Assoc	2335 Industrial Dr.	Panama City		Church	0.	A
582	Springfield Baptist Church	3615 E 3rd St.	Panama City		Church	0.	C

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
583	Temple Baptist Church	2813 E Highway 390	Panama City		Church	0.	C
584	Westview Baptist Church	4101 W 21st St.	Panama City		Church	3.	C
585	The Tao of Holy Confuius Assn	609 Sparrow St.	Panama City		Church	0.	C
586	Our Lady o The Rosary	5622 Julie Dr.	Panama City		Church	0.	C
587	St. Dominic's Roman Catholic c	3308 E 15th	Panama City		Church	0.	C
588	St. John the Evagelist Catholi	1005 Fortune Av.	Panama City		Church	0.	C
589	St. Peter and Paul Catholic Ch	1003 n East Av	Panama City		Church	0.	C
590	High Praise Worship Center	7124 Highway 22	Panama City		Church	0.	C
591	Living Word Fellowship	1815 Wilson Av	Panama City		Church	0.	C
592	Zion the Triumphant Church	1515 Foster Av.	Panama City		Church	5.	C
593	Bayou George Christian Church	7814 Highway 2301	Panama City		Church	0.	A
594	East Side Christian Church	5906 E Highway 22	Panama City		Church	0.	AE
595	Fellowship Alliance Church	22045 Highway 231 Fount	Panama City		Church	0.	C
596	Heritage Bible Church	1004 Chestnut Av.	Panama City		Church	0.	C
597	First Church of Christ Scienti	1025 Degama Av	Panama City		Church	5.	C
598	Church of Christ-Palo Alto	3119 Highway 231	Panama City		Church	0.	C
599	Set Free of Evangelistic Outre	1900 W 15th St.	Panama City		Church	0.	C
600	Church of God St. Andrews	2801 W 14th St.	Panama City		Church	5.	C
601	First Church of God	1503 E Bus Hwy 98	Panama City		Church	0.	C
602	Church of God St. Andrews	2801 W 14th St.	Panama City		Church	5.	C
603	Grace Fellowship Church	117 N Highway 22A	Panama City		Church	0.	C
604	Holy Nativity Episcopal Church	222 N Bonita Ave	Panama City		Church	0.	C
605	Bayou George House of Prayer	7635 Byou Gearge Dr.	Panama City		Church	0.	C
606	Living Word Fellowship	1815 Wilson Av.	Panama City		Church	0.	C
607	Providence Church	2100 E 5th St.	Panama City		Church	0.	C
608	Holy Temple Church of God in C	802 8th Ct.	Panama City		Church	0.	C
609	Potter's Temple First Born Chu	14 Redwood Av	Panama City		Church	0.	C
610	Freedom Celebration Family Chu	700 Jenks Av	Panama City		Church	5.	C
611	Panama City Fellowship Church	2511 E 3rd St.	Panama City		Church	5.	AE
612	Kingdom hall of Jehovah's Witn	724 W 19th St.	Panama City		Church	0.	C
613	Salon Del Reino De Los Testigo	Highway 77	Panama City		Church	0.	C

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
614	Church of Jesus Christ LDS	3140 State Av	Panama City		Church	0.	C
615	Amazing Grace Lutheran Church-	2530 Jenks Av	Panama City		Church	0.	C
616	Redemption Lutheran Church-LCM	1700 E 11th St.	Panama City		Church	0.	C
617	Trinity Lutheran Church-LCMS	1001 W 11th St.	Panama City		Church	0.	C
618	First United Methodist Church	903 E 4th St.	Panama City		Church	0.	C
619	Hilland Park United Methodist	2420 E Baldwin Rd.	Panama City		Church	0.	C
620	St. Mark United Methodist Chu	4400 W 19th St.	Panama City		Church	4.	C
621	Aldersgate United Methodist Ch	7225 Highway 231	Panama City		Church	0.	C
622	First United Methodist Church	903 E 4th St.	Panama City		Church	0.	C
623	Greenhill United Methodist Chu	12025 Jackson Rd	Panama City		Church	0.	C
624	Trinity United Methodist Churc	2322 E 3rd St.	Panama City		Church	0.	C
625	First Church of the Nazarene	3610 W 17th St.	Panama City		Church	5.	C
626	Free Spirit Community Church	721 E 11th St.	Panama City		Church	0.	C
627	Freedom Celebration Family Chu	700 Jenks Av	Panama City		Church	5.	C
628	Heritage Bible Church	1004 Chestnut Av	Panama City		Church	0.	C
629	High Priase Worship Center	7124 Highway 22	Panama City		Church	0.	C
630	Panama City Fellowship Church	2511 E 3rd St.	Panama City		Church	5.	AE
631	Brown Temple	1501 Lincoln Av.	Panama City		Church	0.	C
632	Gospel Asssembly Church	424 E Baldwin Rd.	Panama City		Church	0.	C
633	Greater Faith Spiritual House	806 N East Av.	Panama City		Church	0.	C
634	North Sherman Ave Community Ch	Sherman Av.	Panama City		Church	0.	C
635	New Life Pentecostal Church	1818 Michigan Av	Panama City		Church	5.	C
636	All Saints Holiness Church	1304 Roosevelt Dr.	Panama City		Church	0.	C
637	Jesus Only Tabernacle PAW	1421 Fortune Av	Panama City		Church	0.	C
638	Neal Temple FBC of the Living	900 E 11th St	Panama City		Church	0.	C
639	Panama Worship Center	2429 W Orlando Rd	Panama City		Church	0.	C
640	Pentecostal Temple COGIC	1224 N Cove Blvd	Panama City		Church	0.	C
641	Covenant Presbyterian Church	2350 Frankford Av	Panama City		Church	0.	C
642	First Presbyterian Church	100 E 7th St.	Panama City		Church	0.	C
643	Grace Presbyterian Church	1415 Airport Rd	Panama City		Church	0.	C
644	Panama City Korean Church	426 Burkett Dr.	Panama City		Church	0.	C

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
645	Unitarian Universalist Fellows	1218 Marie Ann Blvd.	Panama City		Church	0.	C
646	BEACH CLUB	10637 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
647	BEACH MOTEL	10996 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
648	BEACHSIDE MOTEL	10710 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
649	BIKINI BEACH RESORT	11001 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
650	CLUBLIFE RESORTS INC	8317 FRONT BEACH RD	Panama City Beach	904/235	Hotel/Motel	5.	C
651	COOKS MOTEL	9300 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	C
652	DAYS INN	12818 FRONT BEACH RD	Panama City Beach	904/233	Hotel/Motel	0.	AE
653	HOLIDAY LODGE RESORT	6518 W HIGHWAY 98	Panama City Beach	904/234	Hotel/Motel	3.	AE
654	LONG BEACH RESORT	10511 FRONT BEACH RD	Panama City Beach	904/235	Hotel/Motel	4.	C
655	PARK INN	11004 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
656	PARSONS SUITES	10719 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
657	RED CARPET INN	10811 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
658	SEA STAR INN	900 GULFSIDE CT	Panama City Beach	904/234	Hotel/Motel	4.	C
659	SEA-N-SUN MOTEL	11000 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
660	WHITE'S MOTEL & APARTMENTS	10716 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
661	ALLEN'S GULFSIDE MOTEL	9622 BEACH BLVD	Panama City Beach	904/234	Hotel/Motel	4.	C
662	DIPLOMAT GUEST HOUSE	100 BEACH BLVD	Panama City Beach	904/235	Hotel/Motel	4.	C
663	INN AT ST THOMAS SQUARE	8730 THOMAS DR	Panama City Beach	904/234	Hotel/Motel	4.	C
664	LOLLYE ON THE BEACH	8507 SURF DR	Panama City Beach	904/233	Hotel/Motel	4.	C
665	MARRIOTT HOTELS & RESORTS	4200 MARRIOTT DR	Panama City Beach	904/234	Hotel/Motel	5.	C
666	SHIPSHAPE INN	3821 THOMAS DR	Panama City Beach	904/234	Hotel/Motel	4.	C
667	SUNNY SANDS MOTEL	8501 SURF DR	Panama City Beach	904/234	Hotel/Motel	4.	C
668	TREASURE COVE MOTEL	2603 THOMAS DR	Panama City Beach	904/230	Hotel/Motel	5.	C
669	ADMIRAL-IMPERIAL MOTEL	16819 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	AE
670	BENNETT'S REEF INC	15285 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
671	CARILLON BEACH REALTY INC	106 VILLAGE WAY	Panama City Beach	904/234	Hotel/Motel	3.	C
672	GALA INN	17674 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	5.	VE
673	INN PARADISE	15727 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	C
674	PALMETTO MOTEL COURT	17255 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	AE
675	PANAMA CITY RESORT/CLUB	16709 FRONT BEACH RD	Panama City Beach	904/235	Hotel/Motel	4.	AE

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676	PANAMA INN	16328 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	4.	AE
677	PINEAPPLE BEACH VILLAS/MOTEL	19979 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	VE
678	REID'S COURT & TRAILER PARK	14806 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
679	SEA LODGE MOTEL	14825 FRONT BEACH RD	Panama City Beach	904/234	Hotel/Motel	0.	C
680	Al Harlen Rentals	2203 Laurie Ave.	Panama City Beach		Mobile_Homes	5.	C
681	Austin Mobile Home Park	9502 Clarence Ave.	Panama City Beach		Mobile_Homes	0.	C
682	Bayside Mobile Home Park	6325 Big Daddy Dr.	Panama City Beach		Mobile_Homes	1.	AE
683	Brown Trailer Park	2204 Laurie Ave.	Panama City Beach		Mobile_Homes	5.	C
684	Capt's Quarter Mobile Estates	2406 Joan Ave.	Panama City Beach		Mobile_Homes	5.	C
685	Chase Woods Mobile Home Park	2200 Lauri Ave.	Panama City Beach		Mobile_Homes	5.	C
686	Eden Rv Park & Campground	1957 Allison Ave.	Panama City Beach		Mobile_Homes	5.	C
687	Gulf Pines Rv Park	8507 Gulf Pines Dr.	Panama City Beach		Mobile_Homes	5.	C
688	Heritage R V Park	14900 Front Beach Rd.	Panama City Beach		Mobile_Homes	5.	C
689	Johnson Rentals	122 Lake Place	Panama City Beach		Mobile_Homes	4.	C
690	Magnolia Beach Campground	7800 Magnolia Beach Roa	Panama City Beach		Mobile_Homes	5.	C
691	Panama City Beach Campground	11826 W. Hwy 98	Panama City Beach		Mobile_Homes	5.	C
692	Panama City Beach KOA	8800 Thomas Drive	Panama City Beach		Mobile_Homes	4.	C
693	Park Place	5612 E. Hwy 98	Panama City Beach		Mobile_Homes	2.	C
694	Paul Morlandsto Mobile Home	Allison Ave.	Panama City Beach		Mobile_Homes	5.	C
695	Pride Resorts Panama City Beac	1219 Thomas Drive	Panama City Beach		Mobile_Homes	4.	C
696	Racoon River Campground	12405 Middle Beach Rd.	Panama City Beach		Mobile_Homes	0.	C
697	St. Andrews State Recreation A	4415 Thomas Dr.	Panama City Beach		Mobile_Homes	4.	C
698	Venture Out At Panama City Bea	4345 Thomas Dr.	Panama City Beach		Mobile_Homes	4.	C
699	PCB Water Plant #2	100 Argonaut Street	Panama City Beach		HazMat	0.	C
700	PCB WTP #1	131 San Vincente St	Panama City Beach		HazMat	0.	C
701	PCB # 7	601 Henley Dr.	Panama City Beach		HazMat	4.	C
702	PCB WWTP-main	206 North Gulf Blvd	Panama City Beach		HazMat	0.	C
703	Sandy Creek PWTP	1732 Highway 2297	Panama City Beach		HazMat	0.	C
704	Sandy Creek WWTP	1732 Highway 2297	Panama City Beach		HazMat	0.	C
705	Southern Bell PCB	604 Nautilus	Panama City Beach		HazMat	0.	C
706	Thomas Drive Fire Department	3928 Holiday Drive	Panama City Beach		Fire Station	2.	C

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707	West Bay-Woodville Fire Depart	15002 Memorial Circle	Panama City Beach		Fire Station	3.	C
708	Faith Christian Early Learnin	13300 Back Beach Rd.	Panama City Beach	(850)23	Child Care	0.	C
709	Beach Church of Christ	8910 Front Beach Road	Panama City Beach		Church	5.	C
710	Eastgate Christian Fellowship	8317 Front Beach Rd.	Panama City Beach		Church	5.	C
711	First Assembly of God of Panam	17829 W Highway 98	Panama City Beach		Church	0.	C
712	Grace Episcopal Church	9101 W Highway 98	Panama City Beach		Church	0.	C
713	Gulf Beach Presbyterian Church	271 S. Highway 79	Panama City Beach		Church	0.	C
714	St. Bernadette Family Life Cen	1214 Moylan Rd.	Panama City Beach		Church	0.	C
715	St. Bernadette Catholic Church	1214 Moylan Rd.	Panama City Beach		Church	0.	C
716	West Bay Advent Christian Chur	6326 Laird Park Rd West	Panama City Beach		Church	0.	C
717	His Ministries International I	9106 Abba Ln	Panama City Beach		Church	0.	C
718	Long Beach Assembly of God	1913 Cauley Av	Panama City Beach		Church	5.	C
719	Gulf Beach Baptist Church	10620 Hutchison Blvd	Panama City Beach		Church	0.	C
720	First Baptist Church of Panama	Beach 204 Cobb Rd	Panama City Beach		Church	0.	C
721	First Baptist Church of Sunnyw	22017 Lakeview Dr.	Panama City Beach		Church	0.	C
722	Gulf Beach Baptist Church	10620 Hutchison Blvd	Panama City Beach		Church	0.	C
723	Vineyard Christian Fellowship	9721 Thomas Dr.	Panama City Beach		Church	4.	C
724	Kingdom Hall of Jehovah's Witn	6530 N Lagoon Dr.	Panama City Beach		Church	2.	AE
725	Christ Our Savior Lutheran Chu	12911 Agave St	Panama City Beach		Church	0.	C
726	Woodlawn United Methodist Chur	213 Carolyn Av.	Panama City Beach		Church	4.	C
727	Noah's Ark	12902 Front Beach Rd.	Panama City Beach		Church	0.	AE
728	Woodlawn United Methodist Chur	213 Carolyn Av	Panama City Beach		Church	4.	C
729	Faith Christian Family Church	13300 Back Beach Rd.	Panama City Beach		Church	0.	C
730	Gulf Beach Presbyterian Church	271 S Highway 79	Panama City Beach		Church	0.	C
731	Sewage Treatment Facility		Parker		Sewage Treatment	5.	C
732	Parker City Hall/FireStation		Parker		Fire Station	5.	C
733	Rice Paddee		Parker		Mobile_Homes	0.	C
734	Billy Millican		Parker		Mobile_Homes	0.	C
735	Robinson's		Parker		Mobile_Homes	3.	C
736	Bay Breez		Parker		Mobile_Homes	0.	C
737	Bay Breez		Parker		Mobile_Homes	0.	C

Table 3-7 Bay County Critical Facilities (con't)

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
738	Sun Coast		Parker		Mobile_Homes	2.	C
739	Shady Lane		Parker		Mobile_Homes	0.	C
740	Arthor Gont		Parker		Mobile_Homes	0.	C
741	East Bay Villas		Parker		Mobile_Homes	0.	C
742	Barbara Kuhn		Parker		Mobile_Homes	0.	C
743	J.F. Simmons		Parker		Mobile_Homes	0.	C
744	Howard Hendricks		Parker		Mobile_Homes	0.	C
745	Smugglers Cove		Parker		Mobile_Homes	0.	C
746	Bible Believers Baptist Church	4646 E. Bus Hwy 98	Parker		Church	0.	C
747	First Baptist Church of Parker	4630 E Business Highway	Parker		Church	0.	C
748	Kid's Club Day Care	2027 Joan Ave	Panama City Beach		Child Care	5.	C
749	Lambs to Lions	1616 Allison Ave	Panama City Beach		Child Care	5.	C
750	Learning Tree II	7101 Big Daddy Dr.	Panama City Beach		Child Care	1.	C
751	YOUNG'S SEA RANCH MOTEL & APTS	HC 3 BOX 171	PORT ST JOE	904/648	Hotel/Motel	5.	C
752	Deer Haven Trailer Park	2318 S. Dale Avenue	Southport		Mobile_Homes	0.	C
753	Fort Apachee Trailer Park	6600-14 Tillman Rd. (Rt	Southport		Mobile_Homes	2.	AE
754	Ja Ma Lo Rv Trailer Park	8812 Resota Beach Rd.	Southport		Mobile_Homes	5.	C
755	Kingswood Mobile Home Park	9219 Kingswood Road	Southport		Mobile_Homes	0.	C
756	Southport Fire Department	8821 Silver Leaf Aven	Southport		Fire Station	5.	C
757	Stacey's Swingers Pre School	14130 North HWY 77	Southport		Child Care	0.	C
758	Deerpoint Lake Assembly of God	3317 New Church Rd	Southport		Church	0.	C
759	Southport Assembly of God	7308 Highway 77	Southport		Church	2.	C
760	First Assembly of God Church o	7809 County Rd 2302	Southport		Church	0.	C
761	Sand Hills Asesembly of God Ch	14032 Highway 77	Southport		Church	0.	C
762	Southport Assembly of God	7308 Highway 77	Southport		Church	2.	C
763	First Baptist Church of Southp	Bridge Rd.	Southport		Church	0.	C
764	Kingwood Baptist Church	9206 Kingwood Rd	Southport		Church	0.	C
765	Sand Hills Community Church	306 Spikes Rd	Southport		Church	0.	C
766	Bay Oaks Village	409 School Avenue	Springfield		Mobile_Homes	0.	C
767	Springfield Fire Department	3726 East 3rd Street	Springfield		Fire Station	0.	C
768	Springfield City Hall		Springfield	850-872		0.	C

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
769	Springfield Grammar School		Springfield		School	0.	C
770	Adult Center		Springfield			4.	X500
771	Celebration	904 Transmitter Rd.	Springfield		Church	0.	C
772	Church of the Living God Pilla	3531 St. John St.	Springfield		Church	0.	C
773	St. Patrick's Episcopal Church	5425 E 15th St.	Springfield		Church	0.	C
774	Springfield Community Church	615 Transmitter Rd.	Springfield		Church	0.	C
775	First Mount Moriah baptist Chu	3400 E 1st Ct	Springfield		Church	0.	C
776	Rehovah New Gulf Coast	209 Detroit Av	Springfield		Church	5.	C
777	First Mount Moriah Baptist Chu	3400 E 1st Ct.	Springfield		Church	0.	C
778	Midway Baptist Church	5008 E 14th St.	Springfield		Church	0.	C
779	Greater Praise & Deliverance C	227 Claire Av	Springfield		Church	0.	C
780	Springfield Worship Center	318 School Av	Springfield		Church	0.	C
781	Jehovah's Witnesses-Kingdom Ha	5209 E 11th St.	Springfield		Church	0.	C
782	First United Methodist Church	School Av.	Springfield		Church	0.	A
783	Gove Temple First Born Church	157 Harlem Av	Springfield		Church	0.	C
784	Straightway Christian Ministri	1202 School Av	Springfield		Church	0.	A
785	Jehovah's Witnesses	22626 Lakeview Dr.	Sunnyside		Church	0.	C
786	Callahan Trailers	9422 Hwy 79	West Bay		Mobile_Homes	0.	C
787	Mobile Home Villa	9205 Lake Forest Dr.	Youngstown		Mobile_Homes	4.	AE
788	Bayou George Fire Department	6315 Ammons lane	Youngstown		Fire Station	0.	C
789	Youngstwon Baptist Church	12005 Highway 231	Youngstown		Church	0.	C
790	Kingdom Hall of Jehovh's Witne	8904 Highway 2301	Youngstown		Church	4.	C
791	Lighthouse Worship Center	12904 Highway 231	Youngstown		Church	0.	C
792	Bear Creek-Youngstown Fire	10840 Cowells	Youngstown		Fire Station	0.	C
793	Green Hills/Fountain Fire				Fire Station	0.	C
794	Mexico Beach Fire Departme				Fire Station	0.	C
795	Gulf Power Plant	6804 Highway 2300	Southport		HazMat	0.	C
796	Mexico Beach water	113 N 20th St	Mexico Beach		HazMat	0.	C
797	PCB Well	10290 W ALT U.S. 98	Panama City Beach		HazMat	0.	C
798	PCB WWTP BAY POINT	100-c Delwood Beach	Panama City Beach		HazMat	0.	C
799	Pinnacle Port	23223 US HWy 98	Panama City Beach		HazMat	0.	C

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
800	Shores WWTP	22500 US HWY 98	Panama City Beach		HazMat	0.	C
801	Barrentine Mobile Home Par	2711 Ormond Ave.	Hiland Park		Mobile_Homes	0.	C
802	Bayview Mobile Home Park	25th Drummond Avenue	Panama City		Mobile_Homes	0.	C
803	Big Gator Trailer Park	Hwy 98 & 32nd St.	Mexico Beach		Mobile_Homes	3.	C
804	Blair Mobile Home Park	1510 Gainer Ave.	Cedar Grove		Mobile_Homes	0.	C
805	Callaway Trailer Courtn	286 N. Hwy 22A	Panama City		Mobile_Homes	0.	C
806	Cinalli Trailer Park	Kimbrell St. Lois St.	Panama City		Mobile_Homes	0.	C
807	Conrad's Trailer Park	7118 Resota Lane	Deer Point		Mobile_Homes	0.	C
808	Country Pines Mobile Home	8517, 8523, 8529, 8613 T	Panama City Beach		Mobile_Homes	0.	C
809	Daves Mobile Home Park	2812 Hwy. 2321	Panama City		Mobile_Homes	0.	C
810	Al Governor Campground	Hwy 98 (P.O. Box 13700)	Mexico Beach		Mobile_Homes	3.	C
811	Islander Rv Park	2600 Hwy 98	Mexico Beach		Mobile_Homes	3.	C
812	Johnsons Mobile Home Park	1009 3 24th Place	Panama City		Mobile_Homes	0.	C
813	Matinchek Mobile Home Park	1032 N. 15th St.	Mexico Beach		Mobile_Homes	0.	C
814	Melody Lane Trailer Park	4926 E. 2nd St.	Parker		Mobile_Homes	0.	C
815	Mirical Strip Rv Resort Pa	10510 Front Beach Rd.	Panama City Beach		Mobile_Homes	4.	C
816	Ocean Park Rv Resort	23026 W. Hwy 98	Panama City Beach		Mobile_Homes	0.	C
817	Out-Door World Park	Highway 77 N. Side Baile	Lynn Haven		Mobile_Homes	0.	C
818	Peaden Mobile Home Park	2741 Carol Lane	Panama City		Mobile_Homes	0.	C
819	Pitts Trailer Park	5114 N. Star Ave.	Panama City		Mobile_Homes	0.	C
820	Port Lagoon Yacht Basin	5201 N. Lagoon Dr.	Panama City Beach		Mobile_Homes	0.	C
821	Reid's Court & Trailer Par	14806 West Highway 98	Panama City Beach		Mobile_Homes	0.	C
822	Robinson's Trailer Park	6600 E Hwy 98a	Panama City		Mobile_Homes	0.	C
823	Russell O. Voyles and Co.	4113 Vyles Road	Panama City		Mobile_Homes	0.	C
824	Rustic Sands Campground	Hwy 386a (800 15th St.)	Mexico Beach		Mobile_Homes	0.	C
825	Sea Gull Trailer Park	14700 West Highway 98	Panama City Beach		Mobile_Homes	0.	C
826	Sinquefield Trailer park	9405 Soyna Circle	Panama City Beach		Mobile_Homes	0.	C
827	Southport (Millers) Traile	7511 Talma Gage Street	Southport		Mobile_Homes	0.	C
828	Spring Mobile Home Park	1709 Chaucer Lane	Panama City		Mobile_Homes	0.	C
829	Sun & Sand Mobile Home Par	1100 N. 15th St.	Mexico Beach		Mobile_Homes	0.	C
830	Willow Wood Mobile Home Pa	7300 Willow Wood Road (H	Panama City		Mobile_Homes	0.	C

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
831	Anna's Small World		Panama City Beach		Child Care	0.	C
832	Appletree Academy	7221 Patronis Drive	Panama City Beach		Child Care	0.	C
833	Bayou George Head Start	7332 Hudson Rd.	Panama City		Child Care	0.	C
834	First Baptist Bayou Georg	Rt. 1 Box 784 Hwy 179	Panama City		Child Care	0.	C
835	Jeanne's Kiddiegarden	160 N.Star Ave	Panama City		Child Care	0.	C
836	Phoenix Preschool #215	395 HWY 390	Panama City		Child Care	0.	C
837	St. Bernadette Family Life	1214 Moylan Rd	Panama City Beach		Child Care	0.	C
838	Tyndall Child Development	113 Suwannee Rd	Tyndall AFB		Child Care	0.	C
839	Glenncove Nursing Pavillio	1027 East Business	Panama City		Nursing Home	0.	C
840	The Rock Pre-School		Panama City		Child Care	0.	C
841	Bay Correctional	5400 Bayline Drive			Correctional Faci	0.	C
842	SAND		Panama City Beach		Lift Station	4.	VE
843	SEAC		Panama City Beach		Lift Station	0.	C
844	LAKE		Panama City Beach		Lift Station	0.	A
845	DRIF		Panama City Beach		Lift Station	0.	VE
846	OLEA		Panama City Beach		Lift Station	0.	C
847	WIND		Panama City Beach		Lift Station	4.	C
848	NAUT		Panama City Beach		Lift Station	0.	C
849	CLUB		Panama City Beach		Lift Station	5.	A
850	EDGE		Panama City Beach		Lift Station	4.	AE
851	DEMN		Panama City Beach		Lift Station	4.	C
852	BEDR		Panama City Beach		Lift Station	4.	C
853	SHER		Panama City Beach		Lift Station	4.	C
854	DUNE		Panama City Beach		Lift Station	4.	C
855	FAIR		Panama City Beach		Lift Station	4.	A
856	EAGL		Panama City Beach		Lift Station	5.	A
857	ALLI		Panama City Beach		Lift Station	5.	C
858	BEWA		Panama City Beach		Lift Station	5.	A
859	MOON		Panama City Beach		Lift Station	3.	AE
860	WILD		Panama City Beach		Lift Station	2.	C
861	PIZA		Panama City Beach		Lift Station	5.	C

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862	LAUR		Panama City Beach		Lift Station	5.	C
863	BOCA		Panama City Beach		Lift Station	5.	C
864	HERJ		Panama City Beach		Lift Station	5.	C
865	PIRA		Panama City Beach		Lift Station	2.	AE
866	TWO3		Panama City Beach		Lift Station	1.	AE
867	SUGR		Panama City Beach		Lift Station	0.	VE
868	GLAN		Panama City Beach		Lift Station	5.	C
869	GLAS		Panama City Beach		Lift Station	0.	C
870	JANC		Panama City Beach		Lift Station	5.	C
871	LAGO		Panama City Beach		Lift Station	5.	C
872	SAIL		Panama City Beach		Lift Station	4.	C
873	BAYP		Panama City Beach		Lift Station	2.	C
874	MARL		Panama City Beach		Lift Station	2.	C
875	WEAKFISH		Panama City Beach		Lift Station	0.	AE
876	WAHO		Panama City Beach		Lift Station	2.	C
877	DANI		Panama City Beach		Lift Station	2.	C
878	WINE		Panama City Beach		Lift Station	4.	C
879	NBCH		Panama City Beach		Lift Station	0.	C
880	CARI		Panama City Beach		Lift Station	2.	C
881	JOAN		Panama City Beach		Lift Station	2.	C
882	TREA		Panama City Beach		Lift Station	5.	C
883	EMRLD CST		Panama City Beach		Lift Station	0.	C
884	SHON		Panama City Beach		Lift Station	1.	AE
885	LAGU		Panama City Beach		Lift Station	0.	C
886	WDLM		Panama City Beach		Lift Station	1.	AE
887	WOODLN		Panama City Beach		Lift Station	3.	AE
888	WOODLN		Panama City Beach		Lift Station	4.	C
889	PALM		Panama City Beach		Lift Station	5.	C
890	BAYN		Panama City Beach		Lift Station	5.	C
891	SUMM		Panama City Beach		Lift Station	4.	AE
892	LLII		Panama City Beach		Lift Station	5.	C

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893	PUBX		Panama City Beach		Lift Station	5.	C
894	KMAR		Panama City Beach		Lift Station	0.	C
895	GULF		Panama City Beach		Lift Station	4.	C
896	QUEN		Panama City Beach		Lift Station	5.	C
897	PSCH		Panama City Beach		Lift Station	5.	C
898	WOOD		Panama City Beach		Lift Station	0.	C
899	CAR2		Panama City Beach		Lift Station	2.	C
900	NAVY		Panama City Beach		Lift Station	5.	C
901	WEST		Panama City Beach		Lift Station	0.	C
902	WWTP		Panama City Beach		Lift Station	5.	C
903	PLT1		Panama City Beach		Lift Station	0.	C
904	PLT2		Panama City Beach		Lift Station	0.	C
905	EEND		Panama City Beach		Lift Station	5.	C
906	COUNTY		Panama City Beach		Lift Station	0.	C
907	Police Department	1209 E. 15th St	Panama City		Police	0.	C
908	James Wilson Police Sub-Station	920 Martin Luthe	Panama City		Police	0.	C
909	P-13 Sewage Lift		Parker		Lift Station	4.	C
910	P-12 Sewage Lift		Parker		Lift Station	1.	AE
911	P-17 Sewage Lift		Parker		Lift Station	1.	AE
912	P-16 Sewage Lift		Parker		Lift Station	2.	AE
913	P-5 Sewage Lift		Parker		Lift Station	3.	AE
914	P-4 Sewage Lift		Parker		Lift Station	0.	C
915	P-6 Sewage Lift		Parker		Lift Station	0.	C
916	P-7 Sewage Lift		Parker		Lift Station	4.	C
917	P-8 Sewage Lift		Parker		Lift Station	2.	AE
918	P-9 Sewage Lift		Parker		Lift Station	2.	C
919	P-10 Sewage Lift		Parker		Lift Station	2.	C
920	P-11 Sewage Lift		Parker		Lift Station	2.	AE
921	P-15 Sewage Lift		Parker		Lift Station	5.	C
922	P-2 Sewage Lift		Parker		Lift Station	0.	C
923	P-3 Sewage Lift		Parker		Lift Station	3.	C

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NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
924	P-14 Sewage Lift		Parker		Lift Station	0.	C
925	P-1 Sewage Lift		Parker		Lift Station	0.	C
926	Private Lift Sta		Parker		Lift Station	2.	AE
927	Fire Station/Parker		Parker		Fire Station	5.	C
928	Regional Stormwater Facility		Lynn Haven			5.	C
929	BAY H.S.	1204 Harrison Ave.	Panama City		School	0.	C
930	RUTHERFORD H.S.	1000 School Ave.	Panama City		School	0.	C
931	M. BROWN M.S.	5601 Merrit Brown R	Panama City		School	0.	C
932	MOSLEY H.S.	3418N.Palo Alto Ave	Hiland Park		School	0.	C
933	HILAND PARK Elem.	2507 E. Baldwin Rd.	Panama City		School	0.	C
934	MILLVILLE Elem.	203 N. East Ave.	Millville		School	0.	C
935	WALLER Alt. EOC	11332 E.Hwy 388	Youngstown		School	0.	C
936	SURFSIDE Elem.	300 Nautilus St.	P.C. Beach		School	0.	C
937	MOORE Elem.	1900 Michigan Ave.	Panama City		School	5.	C
938	PATRONIS Elem.	7400 Patronis Dr.	Panama City		School	5.	C
939	SHAW Adult Ctr.	162 Detroit Ave.	Panama City		School	0.	C
940	EVERITT M.S.	608 School Ave.	Springfield		School	0.	C
941	JINKS M.S.	600 W. 11th St.	Panama City		School	0.	C
942	ROSENWALD M.S.	1310 E.11 St.	Panama City		School	0.	C
943	OAKLAND Elem.	2010 W. 12th. St.	Panama City		School	0.	C
944	CALLAWAY Elem.	7115 Hwy 22	Callaway		School	0.	C
945	CEDAR GROVE Elem.	2826 E. 15th St.	Panama City		School	0.	C
946	BEACH Elem.	2507 Baldwin Rd.	Panama City		School	0.	C
947	LYNN HAVEN Elem.	301 W. 9th St.	Lynn Haven		School	4.	C
948	M.K. LEWIS Elem.	1527 Lincoln Ave.	Panama City		School	0.	C
949	CHERRY St. Elem	1125 Cherry St.	Panama City		School	0.	C
950	PARKER Elem	640 S. Hwy 22-A	Parker		School	0.	C
951	PATTERSON Elem	1025 Redwood Ave.	Panama City		School	0.	C
952	SOUTHPORT Elem.	1835 Bridge St.	Southport		School	2.	AE
953	WEST BAY Elem.	14813 School Dr.	Panama City		School	2.	AE
954	HANEY TECH CTR.	3016 Hwy 77	Lynn Haven		School	0.	C

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955	BAY H.S.	1204 Harrison Ave.	Panama City		Shelter	0.	C
956	RUTHERFORD H.S.	1000 School Ave.	Panama City		Shelter	0.	C
957	M. BROWN M.S.	5601 Merrit Brown R	Panama City		Shelter	0.	C
958	MOSLEY H.S.	3418N.Palo Alto Ave	Hiland Park		Shelter	0.	C
959	HILAND PARK Elem.	2507 E. Baldwin Rd.	Panama City		Shelter	0.	C
960	MILLVILLE Elem.	203 N. East Ave.	Millville		Shelter	0.	C
961	WALLER Alt. EOC	11332 E.Hwy 388	Youngstown		Shelter	0.	C
962	CALLAWAY Elem.	7115 Hwy 22	Callaway		Shelter	0.	C
963	LYNN HAVEN Elem.	301 W. 9th St.	Lynn Haven		Shelter	4.	C
964	Northside Elementary	2001 Northside Dr	Panama City		School	0.	C
965	TOMMY SMITH Elem.	5519 Merrit Brown	Panama City		Shelter	0.	A
966	TOMMY SMITH Elem.	5519 Merrit Brown	Panama City		School	0.	A
967	Police Dept.	17110 Firenzo Ave.	Panama City Beach		Police	0.	C
968	Wastewater Plant	206 North Gulf Blvd.	Panama City Beach		Sewage Treatment	0.	C
969						2.	C
970	Oakland Terrace		Panama City			0.	C
971	Marina Civic Center	8 Harrison Avenue	Panama City			4.	C
972	MLK Recreation Center		Panama City			0.	C
973	Lynn Haven WWTP	1010 W 6th Street	Lynn Haven		HazMat	4.	C
974	Lift Station Num 17		Springfield		Lift Station	0.	A
975	Lift Station Num 15		Springfield		Lift Station	5.	AE
976	Lift Station Num 14		Springfield		Lift Station	0.	C
977	Lift Station Num 12		Springfield		Lift Station	5.	C
978	Lift Station Num 13		Springfield		Lift Station	0.	C
979	PUMP STATION		Springfield		Lift Station	4.	X500
980	Lift Station Num 10		Springfield		Lift Station	5.	C
981	Lift Station Num 11		Springfield		Lift Station	0.	X500
982	Lift Station Num 18		Springfield		Lift Station	0.	C
983	Lift Station Num 16		Springfield		Lift Station	0.	AE
984	Callaway CA-4		Callaway		Lift Station	0.	C
985	Callaway CA-5		Callaway		Lift Station	0.	C

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986	Callaway C-12		Callaway		Lift Station	0.	C
987	Callaway CA-1		Callaway		Lift Station	0.	C
988	Calaway CA-15		Callaway		Lift Station	2.	C
989	Callaway CA-2		Callaway		Lift Station	0.	C
990	Callaway CA-17		Callaway		Lift Station	4.	C
991	Callaway CA-7		Callaway		Lift Station	0.	C
992	Callaway CA-6		Callaway		Lift Station	0.	C
993	Callaway CA-16		Callaway		Lift Station	0.	C
994	Callaway CA-14		Callaway		Lift Station	0.	C
995	Callaway CA-10		Callaway		Lift Station	1.	AE
996	Callaway CA-8		Callaway		Lift Station	1.	AE
997	Callaway CA-9		Callaway		Lift Station	0.	C
998	Callaway CA-12		Callaway		Lift Station	1.	AE
999	Beulah Historical Site	522 Beulah Avenue	Callaway			0.	C
1000	Callaway Community Center	524 Beulah Avenue	Callaway			0.	C
1001	Callaway Fire Department	323 S. Berthe Avenu	Callaway		Fires Sation	0.	C
1002	Callaway Public Meeting H	5708 Cherry Street	Callaway			0.	C
1003	Callaway Skate Park	526 Beulah Avenue	Callaway			0.	C
1004	Public Works	324 S. Berthe Avenu	Callaway			0.	C
1005	Callaway City Hall	6601 E. Hwy 22	Callaway			0.	C
1006	Callaway Sports Complex	1 Callaway Park	Callaway			0.	C
1007	Water Plant		Panama City Beach		Water Treatment	99.	99
1008	Fire Station #1	17121 Panama City Beach Park	Panama City Beach		Fire Station	99.	99
1009	Public Works	17115 Panama City Beach Park	Panama City Beach			99.	99
1010	City Hall	110 South Arnold Road	Panama City Beach			99.	99
1011	Fire Station #2	100015 Hutchinson Blvd	Panama City Beach		Fire Station	99.	99
1012	PC LIFT 17				Lift Station	99.	99
1013	PC LIFT 21				Lift Station	99.	99
1014	PC LIFT 18				Lift Station	99.	99
1015	PC LIFT 19				Lift Station	99.	99
1016	PC LIFT 20				Lift Station	99.	99

Table 3-7 Bay County Critical Facilities (con't)

Note: A 99 in Columns CAT or NFIP means that the coordinates were not adequate to deterine a Zone.

NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
1017	PC LIFT 74				Lift Station	99.	99
1018	PC LIFT 75				Lift Station	99.	99
1019	PC LIFT 71				Lift Station	99.	99
1020	PC LIFT 70				Lift Station	99.	99
1021	PC LIFT 86				Lift Station	99.	99
1022	PC LIFT 72				Lift Station	99.	99
1023	PC LIFT 73				Lift Station	99.	99
1024	PC LIFT 83				Lift Station	99.	99
1025	PC LIFT 85				Lift Station	99.	99
1026	PC LIFT 81				Lift Station	99.	99
1027	PC LIFT 84				Lift Station	99.	99
1028	PC LIFT 82				Lift Station	99.	99
1029	PC LIFT 87				Lift Station	99.	99
1030	PC LIFT 32A				Lift Station	99.	99
1031	PC LIFT 38				Lift Station	99.	99
1032	PC LIFT 31				Lift Station	99.	99
1033	PC LIFT 39				Lift Station	99.	99
1034	PC LIFT 102				Lift Station	99.	99
1035	PC LIFT 34				Lift Station	99.	99
1036	PC LIFT 93				Lift Station	99.	99
1037	PC LIFT 55				Lift Station	99.	99
1038	PC LIFT 95				Lift Station	99.	99
1039	PC LIFT29				Lift Station	99.	99
1040	PC LIFT 99				Lift Station	99.	99
1041	PC LIFT 104				Lift Station	99.	99
1042	PC LIFT 107				Lift Station	99.	99
1043	PC LIFT 110				Lift Station	99.	99
1044	PC LIFT 109				Lift Station	99.	99
1045	PC LIFT 97				Lift Station	99.	99
1046	PC LIFT 58				Lift Station	99.	99
1047	PC LIFT 37				Lift Station	99.	99

Table 3-7 Bay County Critical Facilities (con't)

Note: A 99 in Columns CAT or NFIP means that the coordinates were not adequate to deterine a Zone.

NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
1048	PC LIFT 66				Lift Station	99.	99
1049	PC LIFT 103				Lift Station	99.	99
1050	PC LIFT 100				Lift Station	99.	99
1051	PC LIFT 89				Lift Station	99.	99
1052	PC LIFT 92				Lift Station	99.	99
1053	PC LIFT 36				Lift Station	99.	99
1054	PC LIFT 35/35A				Lift Station	99.	99
1055	PC LIFT 69				Lift Station	99.	99
1056	PC LIFT 60				Lift Station	99.	99
1057	PC LIFT 51				Lift Station	99.	99
1058	PC LIFT 61				Lift Station	99.	99
1059	PC LIFT 53				Lift Station	99.	99
1060	PC LIFT 105				Lift Station	99.	99
1061	PC LIFT 57				Lift Station	99.	99
1062					Lift Station	99.	99
1063	PC LIFT 67				Lift Station	99.	99
1064	PC LIFT 200				Lift Station	99.	99
1065	PC LIFT 62				Lift Station	99.	99
1066	PC LIFT 56				Lift Station	99.	99
1067	PC LIFT 63				Lift Station	99.	99
1068	PC LIFT 13				Lift Station	99.	99
1069	PC LIFT 11				Lift Station	99.	99
1070	PC LIFT 12				Lift Station	99.	99
1071	PC LIFT 15				Lift Station	99.	99
1072	PC LIFT 14				Lift Station	99.	99
1073	PC LIFT 16				Lift Station	99.	99
1074	PC LIFT 27				Lift Station	99.	99
1075	PC LIFT 9				Lift Station	99.	99
1076	PC LIFT 23				Lift Station	99.	99
1077	PC LIFT 22				Lift Station	99.	99
1078	PC LIFT 106				Lift Station	99.	99

Table 3-7 Bay County Critical Facilities (con't)

Note: A 99 in Columns CAT or NFIP means that the coordinates were not adequate to deterine a Zone.

NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
1079	PC LIFT 94				Lift Station	99.	99
1080	PC LIFT 91				Lift Station	99.	99
1081	PC LIFT 40				Lift Station	99.	99
1082	PC LIFT 65				Lift Station	99.	99
1083	PC LIFT 64				Lift Station	99.	99
1084	PC LIFT 78				Lift Station	99.	99
1085	PC LIFT 90				Lift Station	99.	99
1086	PC LIFT 96				Lift Station	99.	99
1087	PC LIFT 47				Lift Station	99.	99
1088	PC LIFT 48				Lift Station	99.	99
1089	PC LIFT 49				Lift Station	99.	99
1090	PC LIFT 46				Lift Station	99.	99
1091	PC LIFT 50				Lift Station	99.	99
1092	PC LIFT 113				Lift Station	99.	99
1093	PC LIFT 115				Lift Station	99.	99
1094	PC LIFT 112				Lift Station	99.	99
1095	PC LIFT 54				Lift Station	99.	99
1096	PC LIFT 45				Lift Station	99.	99
1097	PC LIFT 203				Lift Station	99.	99
1098	PC LIFT 41				Lift Station	99.	99
1099	PC LIFT 42				Lift Station	99.	99
1100	PC LIFT 79				Lift Station	99.	99
1101	PC LIFT 80				Lift Station	99.	99
1102	PC LIFT 43				Lift Station	99.	99
1103	PC LIFT 44				Lift Station	99.	99
1104	PC LIFT 77				Lift Station	99.	99
1105	PC LIFT 76				Lift Station	99.	99
1106	PC LIFT 201				Lift Station	99.	99
1107	PC LIFT 25				Lift Station	99.	99
1108	PC LIFT 117				Lift Station	99.	99
1109	PC LIFT 116				Lift Station	99.	99

Table 3-7 Bay County Critical Facilities (con't)

Note: A 99 in Columns CAT or NFIP means that the coordinates were not adequate to deterine a Zone.

NO.	FACILITY	ADDRESS	CITY	PHONE	EMER_FUNC	CAT	NFIP
1110	PC LIFT 32				Lift Station	99.	99
1111	PC LIFT 33				Lift Station	99.	99
1112	PC LIFT 98				Lift Station	99.	99
1113	PC LIFT 205				Lift Station	99.	99
1114	PC LIFT 202				Lift Station	99.	99
1115	PC LIFT 300				Lift Station	99.	99
1116	PC LIFT 68				Lift Station	99.	99
1117	PC LIFT 108				Lift Station	99.	99
1118	PC LIFT 24				Lift Station	99.	99
1119	PC LIFT 52				Lift Station	99.	99
1120	PC LIFT 59				Lift Station	99.	99
1121	PC LIFT 118				Lift Station	99.	99
1122	PC LIFT 204				Lift Station	99.	99
1123	PC LIFT 101				Lift Station	99.	99
1124	PC LIFT 111				Lift Station	99.	99
1125	PC LIFT 114				Lift Station	99.	99
1126	PC LIFT 26				Lift Station	99.	99
1127	PC LIFT 30				Lift Station	99.	99
1128	PC LIFT 28				Lift Station	99.	99
1129	Library	116 S. Arnold St	Panama City Beach			99.	99
1130	Frank Brown Community Center	1501 Mandy Lane	Panama City Beach			99.	99

Table 3-8 Holmes County Critical Facilities

NO.	FACILITY	ADDRESS	CITY	PHONE	EMERFUNC	CAT.	NFIP
1	Arnold Lumber	Highway 90	Bonifay			0	X
2	City of Bonifay - Wwtp	611 East Bay Avenue	Bonifay			0	X
3	Nugget Oil - 17	Highway 81 South and I 10	Ponce De Leon			0	X500
4	City of Bonifay - Well 1	Highway 79 and Mckinnon	Bonifay			0	X
5	City of Bonifay - Well 2	West Mckinnon Street	Bonifay			0	X
6	City of Bonifay - Well 3	Norman Lane	Bonifay			0	X
7	City of Bonifay - Prison Lift Station	Prison Road	Bonifay			0	X
8	Eighty Acre Bay	Off Us 90	Bonifay			0	X
9	Enviromental Protectors Assoc., Inc				Land Fill Active	0	X
10	Bonifay Dump				Land Fill Closed	0	X
11	Dogwood Lakes Dump				Land Fill Closed	0	A
12	Esto/blackburn Dump				Land Fill Closed	0	X
13	Leonia Dump				Land Fill Closed	0	X
14	New Hope Dump				Land Fill Closed	0	X
15	North Caryville Dump				Land Fill Closed	0	A
16	Ponce De Leon Dump				Land Fill Closed	0	X
17	Sand Pond Dump				Land Fill Closed	0	A
18	Poplar Springs Dump				Land Fill Closed	0	X
19	Holmes County Landfill				Land Fill Closed	0	X
20	Bethlehem School				School	0	X
21	Cedar Springs School				School	0	X
22	Live Oak School				School	0	X
23	Mount Zion School				School	0	X
24	Mount Zion School				School	0	X
25	Poplar Springs School				School	0	X
26	Sand Ridge School				School	0	X

Table 3-8 Holmes County Critical Facilities (con't)

NO.	FACILITY	ADDRESS	CITY	PHONE	EMERFUNC	CAT.	NFIP
27	Union School				School	0	X
28	Hillcrest Special Education School				School	0	X
29	Holmes County High School				School	0	X
30	Holmes County Adult Education School				School	0	X
31	Bonifay Elementary School				School	0	X
32	Prosperity Elementary School				School	0	X
33	Ponce De Leon High School				School	0	A
34	Ponce De Leon Elementary School				School	0	A
35	Riverside School				School	0	X
36	FI0027731	East Bay Ave.	Bonifay		Sewage Treatment	0	X
37	Tri-county	P O Box 756	Bonifay	904-547-3948	Airport	0	A
38	Doctor's Memorial Hospital	401 E Byrd Ave		904-547-1120	Heliport	0	X
39	Tharpe	Route 4 Box 572		904-547-2344	Airport	0	X
40	Ponce De Leon, Town				Water Treatment	0	A
41	Ponce De Leon, Town				Water Treatment	0	X
42	Bethlehem High Schoo				Water Treatment	0	X
43	Bonifay, City of Wat				Water Treatment	0	X
44	Bonifay, City of Wat				Water Treatment	0	X

Table 3-9 Washington County Critical Facilities

NO.	FACILITY	ADDRESS	CITY	PHONE_	EMER_FUNC	CAT	NFIP
1	Wash. Co. Convalescent Center	879 Usery Rd.	Chipley			0.	X
2	Wash. Co. Council On Aging	1348 S. Blvd.	Chipley			0.	X
3	Vernon EMS	3199 Moss Hill Rd.	Vernon			0.	X
4	Chipley City Hall	1442 Jackson Ave.	Chipley			0.	X
5	Chipley Water Treatment Plant	692 Rustin Dr.	Chipley			0.	X
6	Vernon City Hall	2996 Main St.	Vernon			0.	A
7	Vernon Water Treatment Plant	2964 Dawkins St.	Vernon			0.	X
8	Wausau Town Hall	1607 Second Ave.	Wausau			0.	X
9	Caryville City Hall	4436 Old Spanish Trl.	Caryville			0.	A
10	Ebro City Hall	6629 Dogtrack Rd.	Ebro			0.	X
11	Florida Dept. of Transportation	1074 Highway 90	Chipley			0.	X
12	Washington County Ag Center	1424 Jackson Ave.	Chipley			0.	X
13	Washington Correction Institute	4455 Sam Mitchell Dr.	Chipley			0.	X
14	Wausau Landfill					0.	X
15	EOC	1331 S. Blvd.	Chipley			0.	X
16	Gulf Power Co.	1195 Jackson Ave.	Chipley			0.	X
17	Northwest Fla. Comm. Hospital	1360 Brickyard Rd.	Chipley			0.	X
18	Wash. Co. Courthouse	1293 Jackson Ave.	Chipley			0.	X
19	Wash. Co. Sheriff's Office	1293 Jackson Ave.	Chipley			0.	X
20	Washington County Public Works	2215 Mud Hill Rd.	Wausau			0.	X

Table 3-10 Jackson County Critical Facilities

NO.	FACILITY	ADDRESS	CITY	PHONE	EMERFUNC	CAT.	NFIP
1	Marianna Work Camp - Corrections	4793 Pelt Street	Marianna	904-482-9561	Prison - Walk-in Freezer	0	X
2	Marianna Work Camp - Corrections	4793 Pelt Street	Marianna	904-482-9561	Prison - Laundry	0	X
3	Marianna Work Camp - Corrections	4793 Pelt Street	Marianna	904-482-9561	Prison Auto & Vehicle Mtn.	0	X
4	Jackson Correctional Institution	Po Box 4900	Malone	904-592-5260 101	Prison (Close Custody)	0	X
5	Grand Ridge, Town of				Water Treatment	0	X
6	Greenwood Town Hall	4207 Bryan Street	Greenwood	904-594-4474	Information and Coordination	0	X
7	Jacob Town Hall	4490 Jackson Road	Cottondale	904-263-6636	Information and Coordination	0	X
8	Malone Town Hall	5182 9th Avenue	Malone	904-569-5416	Information and Coordination	0	X
9	Cottondale Town Hall, Police & Fire Dept	2659 Front Street	Cottondale	904-352-4361	Information and Coordination	0	X
10	Campbellton Town Hall	Po Box 38	Campbellton	904-263-4535	Information and Planning	0	X
11	Marianna Radio Tower	4168 South Street	Marianna	904-482-2414	Communications	0	X
12	Blountstown, City of				Water Treatment	0	X
13	Comcast Cable	2486 Highway 73	Marianna	334-793-2669	News, Weather, Comm. Bulletin	0	A
14	Blountstown, City of				Water Treatment	0	X
15	Blountstown, City of				Water Treatment	0	X
16	Blountstown, City of				Water Treatment	0	X
17	Malone, Town of Wate				Water Treatment	0	X
18	Marianna City Hall, Police & Fire Dept.	4225 Clinton Street	Marianna	904-482-2414	Fire Department/police Station	0	X
19	Malone, Town of Wate				Water Treatment	0	X
20	Grand Ridge Volunteer Fire Dept.	2086 Porter Avenue	Grand Ridge	904-592-4621	Fire Department	0	X
21	Jackson County Fire Rescue / Alford Sta	1761 Georgia Street	Alford	904-482-9092	Fire Dept. Ems Services	0	X
22	Jackson County Fire Rescue Campbellton	5283 Hwy 231	Campbellton	904-482-9092	Fire Dept/ Ems Services	0	X
23	Sneads, Town of Wate				Water Treatment	0	X
24	Jackson County Fire Rescue Main Station	3555 Hwy 71	Marianna	904-482-9092	Fire Dept/ems Services	0	X
25	Phillips & Snell Auto Service	5425 Cotton Street	Graceville	904-263-4141	Fuel and Repair of Autos	0	X
26	Greenwood Water Syst				Water Treatment	0	X
27	Jackson Co. Correcti				Water Treatment	0	X
28	Jackson Hospital	4250 Hospital Drive	Marianna	904-526-2200	Hospital	0	X
29	Campbellton Graceville Hospital	5429 Colelge Drive	Graceville	904-263-4431	Hospital	0	X
30	Sneads, Town of Wate				Water Treatment	0	X
31	Jackson Co. Correcti				Water Treatment	0	X
32	Marianna Convalescent Center	4295 Fifth Avenue	Marianna	904-482-8091	Nursing Home	0	X
33	Sunland Training Cen				Water Treatment	0	X
34	Cottondale Elementary School	2766 Levy Street	Cottondale	904-526-5888	Shelter	0	X

Table 3-10 Jackson County Critical Facilities (con't)

NO.	FACILITY	ADDRESS	CITY	PHONE	EMERFUNC	CAT.	NFIP
35	Cottondale High School	2680 Levy Street	Marianna	904-526-5888	Shelter	0	X
36	Golson Elementary	4258 2nd Avenue	Marianna	904-526-5124	Shelter	0	X
37	Graceville Elementary School	5331 Alabama Street	Graceville	904-263-4124	Shelter	0	X
38	Graceville High School	5339 Brown Street	Graceville	904-263-3525	Shelter	0	X
39	Grand Ridge School	6925 Florida Street	Grand Ridge	904-592-8616	Shelter	0	X
40	Hope School	2031 Hope School Drive	Marianna	904-592-2300	Shelter	0	X
41	Jackson Academy of Applied Technology	3932 Technology Circle	Marianna	904-352-4237	Shelter	0	X
42	Malone School	5361 9th Street	Malone	904-569-5200	Shelter	0	X
43	Marianna High School	2979 Daniels Street	Marianna	904-482-8600	Shelter	0	X
44	Marianna Middle School	4144 South Street	Marianna	904-482-4128	Shelter	0	X
45	Riverside Elementary School	2958 Cherokee Street	Marianna	904-526-4278	Shelter	0	X
46	Grand Ridge, Town of				Water Treatment	0	X
47	Sneads High School	8066 Old Spanish Trail	Sneads	904-593-8155	Shelter	0	X
48	Cottondale Community Center	2669 Front Street	Cottondale	904-352-4361	Shelter	0	X
49	Grand Ridge Community Center	6910 Hall Street	Grand Ridge	904-592-4621	Emergency Shelter	0	X
50	Arrowhead Campground				Water Treatment	0	A
51	Elk's Lodge No. 1516				Water Treatment	0	A
52	Caverns Visitor's Ce				Water Treatment	0	X
53	Caverns Visitor's Ce				Water Treatment	0	X
54	Malone Sewage Main Pump Station	5182 9th Avenue	Malone	904-569-5416	Main Sanitation Pump to Treatm	0	X
55	Malone Sewage System	4182 9th Avenue	Malone	904-569-5416	Sewage Life Station (Grinder)	0	X
56	Marianna, City of				Water Treatment	0	X
57	Cottondale Waste Water Treatment Plant	Front Street	Cottondale	904-352-4361	Treats Raw Sewage	0	X
58	Cottondale Lift Station Glastel	Glastel Street	Cottondale	904-352-4361	Pumps Raw Sewage	0	X
59	Cottondale Lift Station Green	Green Street	Cottondale	904-352-4361	Pumps Raw Sewage	0	X
60	Cottondale Lift Station Front	Front Street	Cottondale	904-352-4361	Pumps Raw Sewage	0	X
61	Cottondale Lift Station North	North Street	Cottondale	904-352-4361	Pumps Raw Sewage	0	X
62	Cottondale Lift Station Caddy	Caddy Road	Cottondale	904-352-4361	Pumps Raw Sewage	0	A
63	Marianna Waste Water Treatment Plant	2832 Davey Street	Marianna	904-482-2414	Treatment of Waste Water for m	0	A
64	Marianna, City of				Water Treatment	0	X
65	Marianna, City of				Water Treatment	0	X
66	Cottondale Water Sys				Water Treatment	0	X
67	Cottondale Water Sys				Water Treatment	0	X

Table 3-10 Jackson County Critical Facilities (con't)

NO.	FACILITY	ADDRESS	CITY	PHONE	EMERFUNC	CAT.	NFIP
68	Cottondale Water Sys				Water Treatment	0	X
69	Graceville, Town of				Water Treatment	0	X
70	Kilpatrick Farm	2250 Kilpatrick Lane	Sneads	904-593-5660	Airport	0	X
71	Land's Field	Route 7 Box 506		904-579-4420	Airport	0	X
72	Jackson County Hospital	4250 Hospital Dr	Marianna	904-526-2200	Heliport	0	X
73	Marianna Municipal	Po Box 875	Marianna	904-482-8480	Airport	0	X
74	North American Farms	5559 Concord Road	Bascom	904-569-2881	Airport	0	X
75	Panhandle Aviation	4481 Hwy 71		904-594-3224	Airport	0	X
76	J D Milton Farm	P.o. Box 59		904-354-2050	Airport	0	X
77	Greenwood	Box 191	Greenwood	904-386-4272	Airport	0	X
78	Lawrence			904-592-4366	Airport	0	X
79	Kirkland	4291 Lafayette St.	Marianna	904-526-4228	Airport	0	X
80	Cottondale	Po Box 6	Cottondale	904-352-4416	Airport	0	X
81	Watson	Rt 1, Box 72	Graceville	904-263-4212	Airport	0	X
82	Fla010115	Lant Road	Sneads		Sewage Treatment 100,000+ Gal.	0	X
83	Fl0028185	South Street Sr-276	Marianna		Sewage Treatment 100,000+ Gal.	0	X
84	Fl0030058	Magnolia&front S	Cottondale		Sewage Treatment 100,000+ Gal.	0	X
85	Fl0020117	1001 E Franklin Street	Marianna		Sewage Treatment 100,000+ Gal.	0	A
86	Fl0038555	Southside Graceville	Graceville		Sewage Treatment 100,000+ Gal.	0	X
87	Greenwood Well #2 Pump Station	5099 Fort Road	Greenwood	904-594-4474	Supplies Water to Town of Gree	0	X
88	Greenwood Well #1 Pump Station	5181 Fort Road	Greenwood	904-594-4474	Supply Water to Town of Greenw	0	X
89	Malone Water Department	5182 9th Avenue	Malone	904-569-5416	Water Supply for Town of Malon	0	X
90	Dozier Training School				School	0	X
91	Marianna Water Well #5	2900 Noland Street	Marianna	904-482-2414	Water for City of Marianna	0	X
92	Marianna Water Well #6	4320 9th Street	Marianna	904-482-2414	Water for the City of Marianna	0	X
93	Sunland Well #1	3659 Williams Drive	Marianna	904-482-2414	Water Supply for Sunland Cente	0	X
94	Sunland Well #4	3725 Highway 71	Marianna	904-482-2414	Water Supply for Sunland Cente	0	X
95	Marianna Well #1	4098 Lafayette Street	Marianna	904-482-2414	Water Well for Marianna	0	X
96	Longview School				School	0	X
97	Mcchapel School				School	0	X
98	Faith Baptist Church School				School	0	X
99	Mordes Academy				School	0	X
100	Jackson County School Board Office	2903 Jefferson Street	Marianna	904-593-6169	Coordination	0	X

Table 3-10 Jackson County Critical Facilities (con't)

NO.	FACILITY	ADDRESS	CITY	PHONE	EMERFUNC	CAT.	NFIP
101	Greenwood Town Maintenance	5175 Fort Road	Greenwood	904-594-4474	Storage for Cleanup & Restorin	0	X
102	Graceville Post Office	5360 Cliff Street	Graceville	904-263-3297	Us Mail Delivery	0	X
103	Marianna Public Works Building	4168 South Street	Marianna	904-482-2414	Maintenance/public Works for m	0	X
104	Marianna Ground Storage Tank	3595 Fci Road	Marianna	904-482-2414	Ground Storage for Marianna	0	X
105	Us Post Office (Federal Building)	4396 Lafayette Street	Marianna	904-482-4951	Mail Service	0	X
106	Griffin Grocery	2400 Highway 2	Campbellton	904-263-5137	Food Supplies for Campbellton	0	X
107	Hope School				School	0	X
108	Baptist Bible Institute				School	0	X
109	Tatums Hardware and Supply	3073 Main Street Po Box 266	Cottondale	904-352-4371	Lumber and Plumbing Supplies	0	X
110	Malone High School				School	0	X
111	Grand Ridge High School				School	0	X
112	Alford Elementary School				School	0	X
113	Sneads High School				School	0	X
114	Sneads Elementary School				School	0	X
115	Graceville High School				School	0	X
116	Graceville Elementary School				School	0	X
117	Cottondale Elementary School				School	0	X
118	Cottondale High School				School	0	X
119	Marianna Middle School				School	0	X
120	Frank M Golson Elementary School				School	0	X
121	City of Graceville - Wwtp	865 6 Avenue	Graceville			0	X
122	Lehigh Furniture	4518 Lafayette Street	Marianna			0	X
123	Louisiana Pacific	6112 Old Spanish Trail Road	Cypress			0	X
124	Phillips and Snell Automotive Services	5424 Cotton Street	Graceville			0	X
125	Unocal 76 - Marianna 76 Auto Truckstop	2112 Highway 71	Marianna			0	X
126	Russell - Distribution Center	102 Russell Road	Marianna			0	X
127	Stone Container - Stone Forest Industrie	4 Street and Alabama Street	Graceville			0	X
128	Nugget Oil - 2	2639 Highway 231 at Intersection of I 10	Cottondale			0	X
129	Nugget Oil - 36	I 10 and Highway 71 South	Marianna			0	X
130	Petrolane Gas Service - Marianna	4125 West Lafayette Street	Marianna			0	X
131	City of Graceville - Wtp 1	5242 Brown Street	Graceville			0	X
132	City of Graceville - Wtp 3	990 4 Avenue	Graceville			0	X
133	Alabama Electric Cooperative - Chipley	3609 Earlston Road	Graceville			0	X

Table 3-10 Jackson County Critical Facilities (con't)

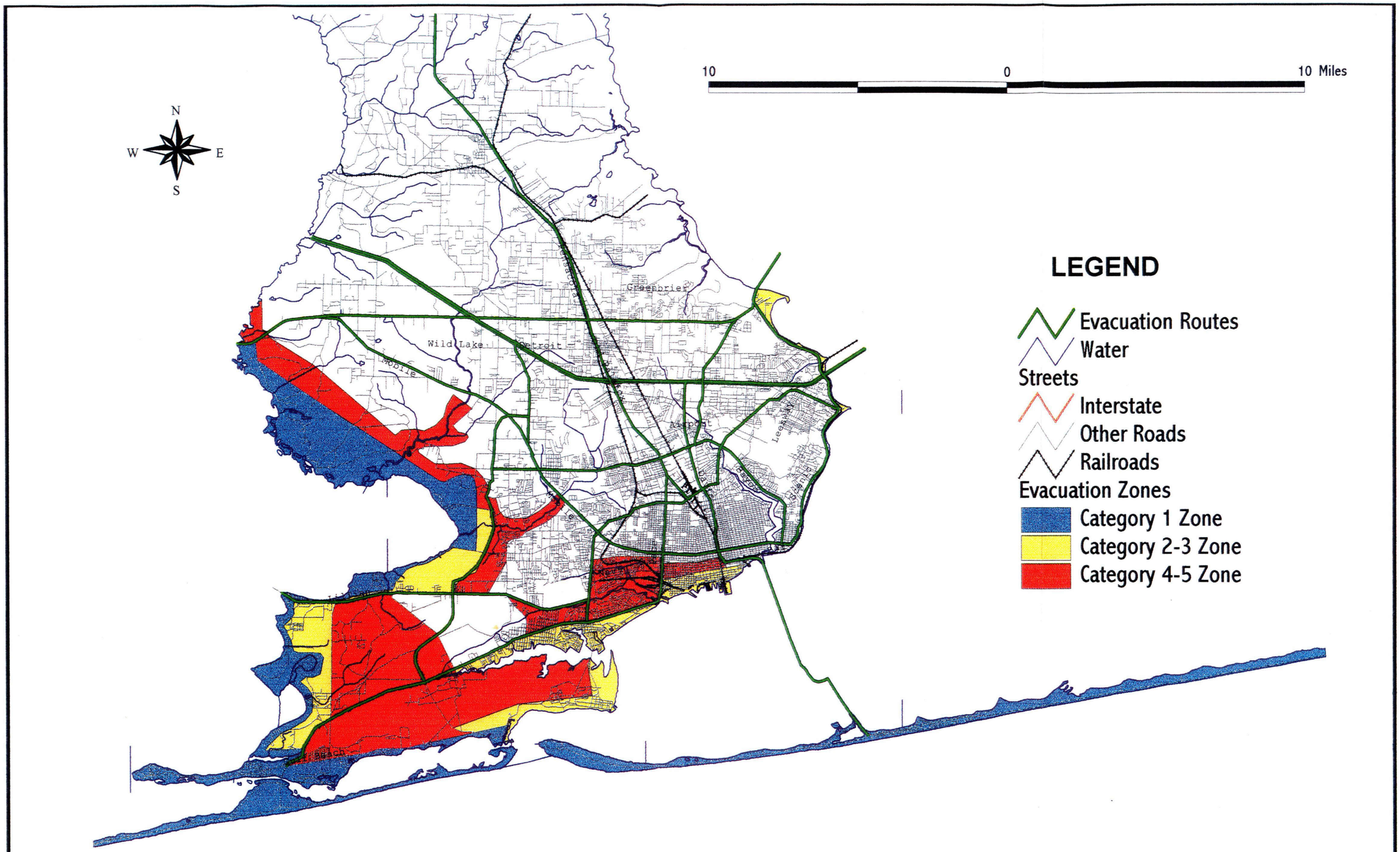
NO.	FACILITY	ADDRESS	CITY	PHONE	EMERFUNC	CAT.	NFIP
134	White Construction	State Road 231	Campbellton			0	X
135	Northwest Florida State Hospital				Hospital	0	X
136	Sunland Mariana Cox Medical Services Cen				Hospital	0	X
137	Jackson Hospital				Hospital	0	X
138	Campellton-graceville Hospital				Hospital	0	X
139	Jackson Co Transfer Sta				Land Fill Active	0	X
140	Springhill Regional Landfill				Land Fill Active	0	A
141	S.r.o.,Inc. Used Oil Recycling Fac.				Land Fill Active	0	X
142	Springhill Reg Slf - C & D Facility				Land Fill Active	0	A
143	A.j.tyus C & D Facility				Land Fill Active	0	X
144	Barnes Waste Tire Processing Facil				Land Fill Active	0	X
145	John W. Kisner Dental Clinic				Land Fill Active	0	X
146	Apalachee Correctional Institute				Land Fill Active	0	X
147	Apalachee Correctional Institution				Land Fill Active	0	X
148	Hrs Jackson County Pub Health Unit				Land Fill Active	0	X
149	Dozier, Arthur G. School				Land Fill Active	0	X
150	Bascom Dump				Land Fill Closed	0	X
151	Cypress Dump				Land Fill Closed	0	X
152	Dellwood Dump				Land Fill Closed	0	X
153	Greenwood Dump				Land Fill Closed	0	X
154	Hunter Dump				Land Fill Closed	0	X
155	Jacob Dump				Land Fill Closed	0	X
156	Pitman Hill Dump				Land Fill Closed	0	X
157	Poston Pond Dump				Land Fill Closed	0	X
158	County Road Camp				Land Fill Closed	0	X
159	Rocky Creek Dump				Land Fill Closed	0	X
160	Round Lake Dump				Land Fill Closed	0	X
161	Shady Grove Dump				Land Fill Closed	0	A
162	Sink Creek Dump				Land Fill Closed	0	X
163	Jackson East Landfill				Land Fill Inactive	0	X
164	City of Cottondale Dump				Land Fill Closed	0	X
165	Malone Dump				Land Fill Closed	0	X
166	Marianna Slf				Land Fill Closed	0	X

Table 3-10 Jackson County Critical Facilities (con't)

NO.	FACILITY	ADDRESS	CITY	PHONE	EMERFUNC	CAT.	NFIP
167	Sneads Dump				Land Fill Closed	0	X
168	Sunland Training Center Dump				Land Fill Closed	0	X
169	Alliance School				School	0	X
170	Bethlehem School				School	0	X
171	Buckhorn School				School	0	X
172	Caniehead School				School	0	X
173	Cedar Pond School				School	0	X
174	Central School				School	0	X
175	Cherokee School				School	0	X
176	Chipola Junior College				School	0	X
177	Cottage Hill School				School	0	X
178	County Training School				School	0	X
179	Fork of the Creeks School				School	0	X
180	Hasty Pond School				School	0	X
181	Kings School				School	0	X
182	Liberty Hill School				School	0	X
183	Little Rocky Creek School (Abandoned)				School	0	X
184	Little Zion School				School	0	X
185	Long Branch School				School	0	X
186	Lovewood School				School	0	X
187	Magnolia School				School	0	X
188	Mount Tabor School				School	0	X
189	Pleasant Hill School				School	0	X
190	Pope School				School	0	X
191	Poplar Spring School				School	0	X
192	Saint Johns School				School	0	X
193	School Number 2				School	0	X
194	Shiloh School				School	0	X
195	Snow Hill School				School	0	X
196	Springfield School				School	0	X
197	Sylvania School				School	0	X
198	Union Grove School				School	0	X
199	Union School				School	0	X

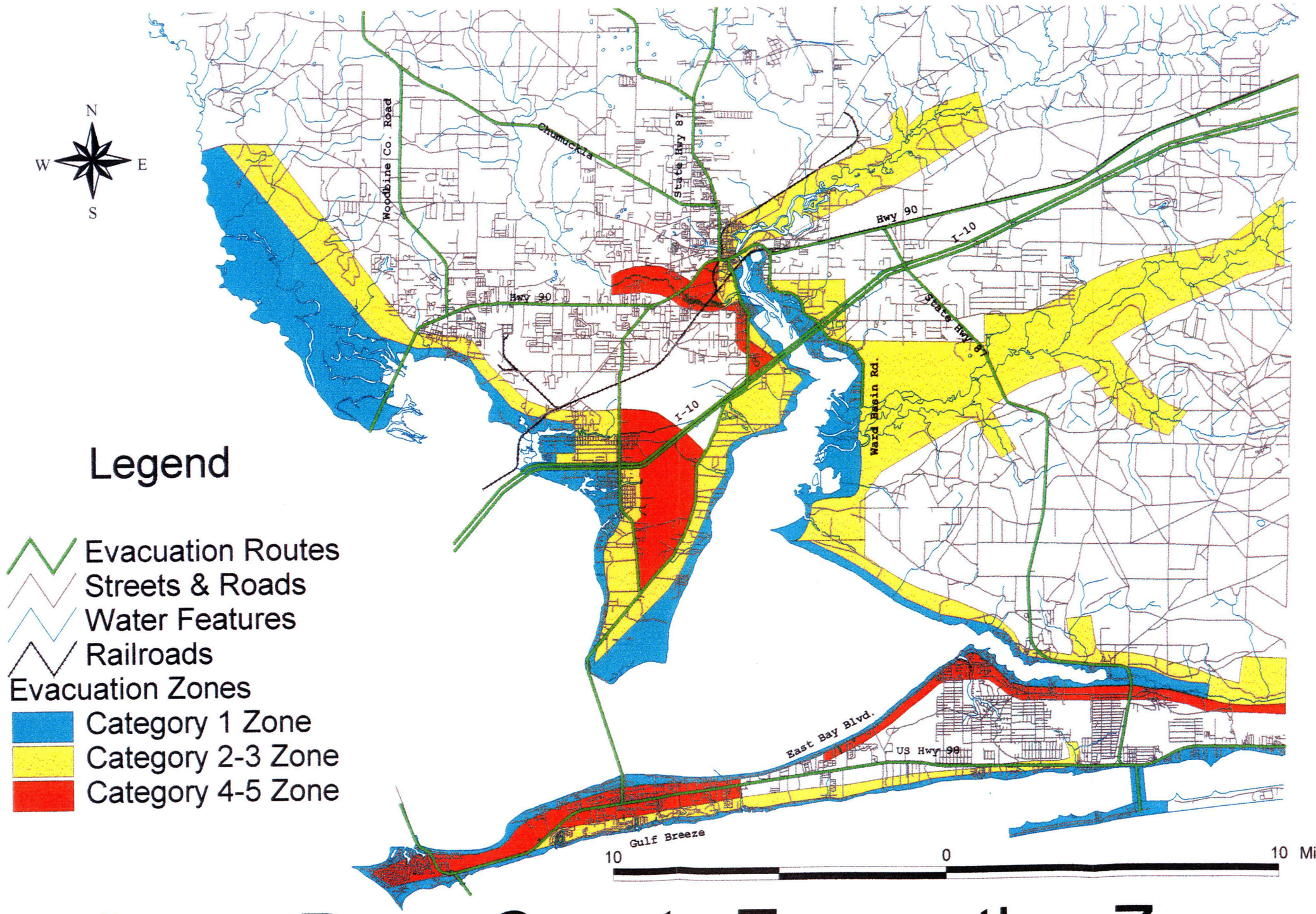
Table 3-10 Jackson County Critical Facilities (con't)

NO.	FACILITY	ADDRESS	CITY	PHONE	EMERFUNC	CAT.	NFIP
200	Riverside Elementary School				School	0	X
201	Jackson County Adult Education Division				School	0	X
202	Marianna High School				School	0	X



Escambia County Evacuation Zones

Plate 3-1



Legend

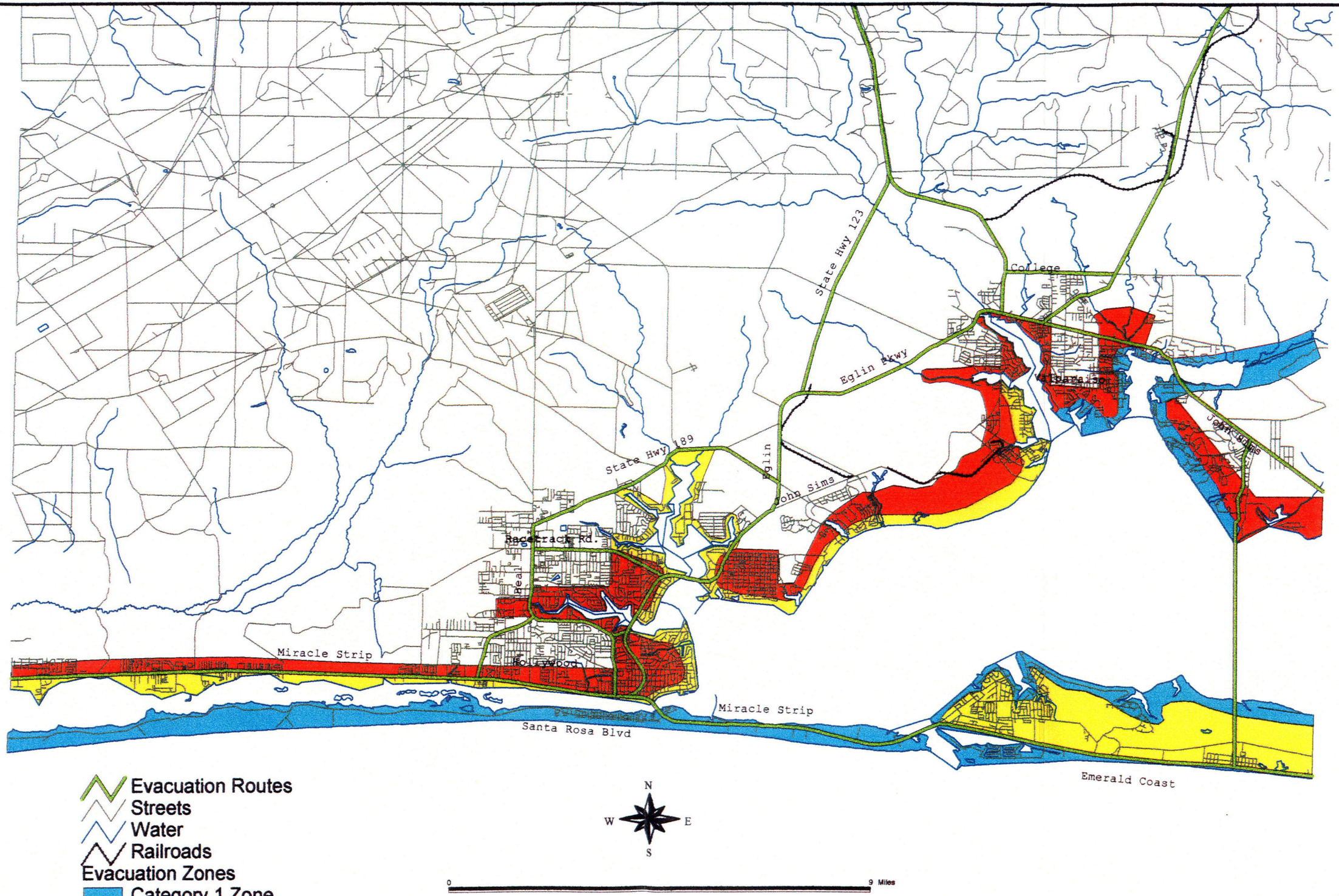
- Evacuation Routes
- Streets & Roads
- Water Features
- Railroads

Evacuation Zones

- Category 1 Zone
- Category 2-3 Zone
- Category 4-5 Zone

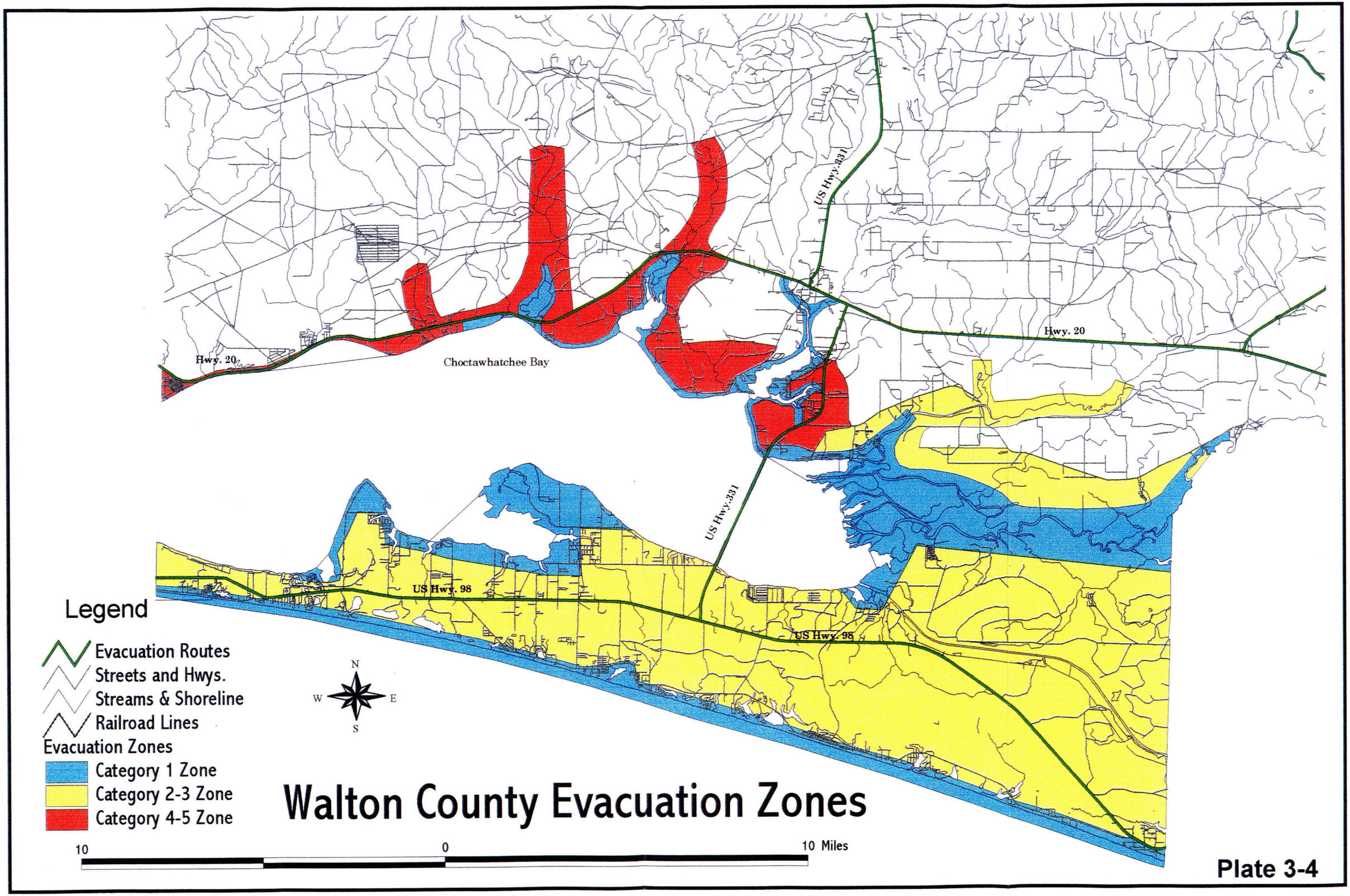
Santa Rosa County Evacuation Zone

Plate 3-2



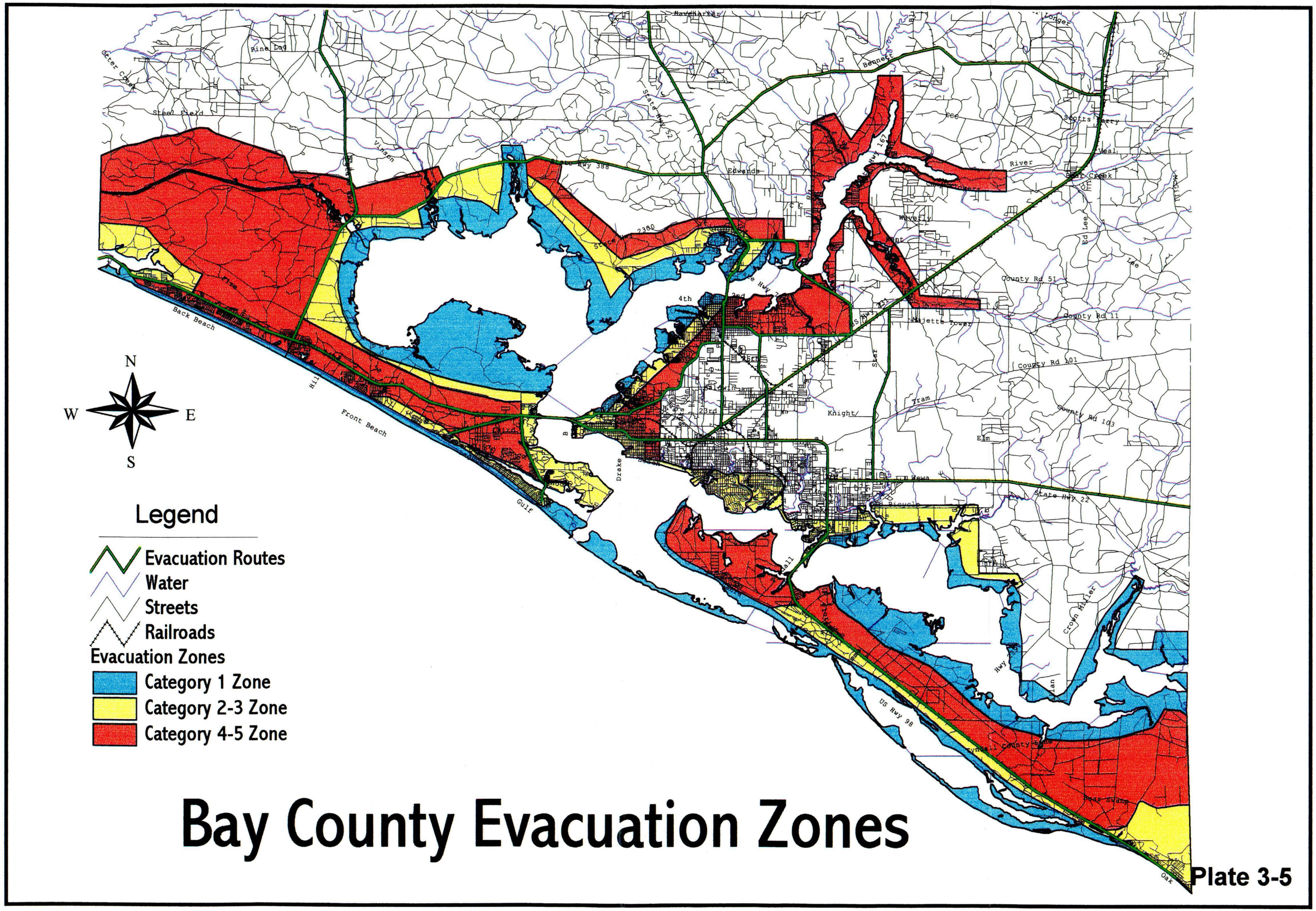
Okaloosa County Evacuation Zones

Plate 3-3



Walton County Evacuation Zones

Plate 3-4



Bay County Evacuation Zones

Plate 3-5

BEHAVIORAL ANALYSIS

CHAPTER FOUR - BEHAVIORAL ANALYSIS

PURPOSE

The behavioral analysis is conducted to provide estimates of public response to a variety of hurricane threats. These estimates are used in the shelter analysis and transportation analysis, and as guidance in emergency decision-making and public awareness efforts.

OBJECTIVES

The specific objectives of the behavioral analysis are to determine the following:

a. The percentages of the population that will evacuate under a range of hurricane threat situations or in response to evacuation advisories.

b. When the evacuating population will leave in relation to an evacuation advisory given by local officials or other persons of authority.

c. The number of vehicles that the evacuating population will use during a hurricane evacuation.

d. The percentage of the total number of evacuating vehicles which may be towing boats, camper trailers, or other vehicular equipment.

e. The probable destinations of the evacuating households. These data consist of percentages of the total number of evacuees going to local public shelters, staying locally with friends or relatives, staying locally in a hotel/motel, or leaving the county for out-of-region destinations.

f. How the threatened population will respond based upon forecasts of hurricane intensity, probability, or other information provided during a hurricane emergency.

g. The evacuation responses of tourists.

METHODOLOGY

Every evacuation plan must contain estimates and assumptions about how people will react when an hurricane evacuation is implemented. Behavioral assumptions for the northwest Florida region were developed by statistical analysis of data gathered from telephone interviews and actual response data from many previous hurricane evacuations spanning a wide geographical area. A quantitative value, for each of the behaviors to be anticipated, was estimated using all available data.

a. Single Event Data.

Actual behavior in a single event can be documented and compared to estimated behavioral characteristics for a specific location. It is tempting to overgeneralize from a single evacuation, however, we know that people will respond differently in different sets of circumstances and at different points in time.

b. Hypothetical Responses.

Hypothetical response data was collected for the Northwest Florida area in 1983 and included questions about intended responses to hypothetical hurricanes threats. Little additional hypothetical data were collected as part of this present update.

c. Telephone Surveys.

During January 1996 about 800 telephone interviews were conducted with residents of Mobile and Baldwin Counties in Alabama and Escambia, Santa Rosa, Okaloosa, Walton and Bay Counties in Florida. Respondents were asked a series of detailed questions about their experiences in Hurricane Opal and less detailed questions about Hurricane Erin.

The sample was designed to provide statistically reliable data for three categories of risk areas in the region. The three risk areas were; the beach area, the mainland surge area and the non-surge areas. Non-surge areas included locations adjacent to surge areas and more removed inland areas such as Defuniak Springs.

The sample was also designed to provide roughly equal representation from four geographical locations, which were: Baldwin and Mobile Counties, Escambia and Santa Rosa Counties, Okaloosa and Walton Counties and Bay County. The majority of the Escambia/Santa Rosa sample came from Escambia County and most of the Okaloosa/Walton sample came from Okaloosa County.

Table 4-1 summarizes the number of interviews completed in each county cluster and in each risk area. The size of samples varies in each risk area and from county to county because of the differences in population.

Table 4-1 Number of Behavioral Samples

	Beaches	Mainland Surge area	Non-surge Area	Total
Mobile/Baldwin	86	61	49	196
Escambia/Santa Rosa	115	37	50	202
Okaloosa/Walton	51	101	49	201
Bay	95	51	52	198
Total	347	250	200	797

ANALYSIS OF SURVEYS

Readers should remember that the figures reported in surveys cited in this report are based upon samples taken from larger populations. In general, the larger the number of people in the sample, the closer the sample value will be to the true population value. A sample of 100 will provide estimates which one can be 90% "confident" are within 5 to 8 percentage points of the true population values. With a sample of 50, one can be 90% "confident" of being within 7 to 11 percentage points of the actual population value.

a. Evacuation Participation Rates.

Participation rate refers to the percentage of the population which will leave their homes to go someplace they believe to be safer when a hurricane threatens. Most of this chapter will describe evacuation participation during Opal and Erin in 1995.

b. Participation Rate in Opal

Evacuation participation rates in Opal varied much more from one risk zone to another than from one county to another, as shown in Table 4-2 below. Alabama mainland surge and non-surge areas responded at lower rates than Florida probably because most of Opal's forecast track was east of Alabama putting Alabama on the weaker side of the storm. The 1986 behavioral studies showed that 90-95% of the high risk areas, 60-80% of moderate risk areas and 20-40% of low risk areas would evacuate. The higher percentage rates would result during Category 3 or higher storms.

Table 4-2 Participation Rate in Opal (Percent)

	Beaches	Mainland Surge	Non-Surge
Mobile/Baldwin	88	39	15
Escambia/Santa Rosa	86	62	34
Okaloosa/Walton	90	66	35
Bay	78	57	37
Average	85	57	30

c. Who Heard the Evacuation Notice

Table 4-3 below shows the percent of the sample population that heard the evacuation notice directly or from others and the percent that didn't hear the notice. Table 4-4 shows the evacuation participation rate (percent) for the same groups of people in Table 4-3.

Table 4-3 Population Hearing Evacuation Notice (Percent)

	Beaches	Mainland Surge	Non-Surge
Heard Directly	74	52	28
Heard from Others	10	11	11
Didn't Hear or Didn't Know	16	37	61

Table 4-4 Evacuation by Hearing Notice Groups (Percent)

	Beaches	Mainland Surge	Non-Surge
Heard Directly	87	75	46
Heard from Others	86	67	54
Didn't Hear or Didn't Know	74	29	18

Based on Tables 4-3 and 4-4 people on the beaches were more likely to evacuate whether they heard the notice or not. Whereas the people in the mainland surge and non-surge areas had significantly lower participation rates for those that didn't hear vs. those that did hear the notice. The figures show that there is a much greater response for those hearing an evacuation order. This determination was not made in the 1986 behavioral studies.

d. Evacuation Notice Interpretation

How the public interprets an evacuation notice is also a critical aspect of response to the notice. Table 4-5 shows the percent of the sample population that interpreted the notice as being mandatory, recommended and those that didn't hear or didn't know. Table 4-6 shows the evacuation participation of those same groups. It is apparent that the participation rate drops if the notice is thought to be recommended and not mandatory. The figures show that there is a much greater response with a mandatory evacuation order. This analysis was not made in the 1986 behavioral study.

Table 4-5 Opal Notice Interpretation (Percent)

	Beaches	Mainland Surge	Non-Surge
Mandatory	46	27	8
Recommended	30	27	23
Didn't Hear or Didn't Know	24	46	69

Table 4-6 Opal Participation Rates by Notice Interpretation

	Beaches	Mainland Surge	Non-Surge
Mandatory	91	87	50
Recommended	79	62	48
Didn't Hear or Didn't Know	74	29	18

e. Automated Telephone Notification

In Escambia and Santa Rosa Counties an automated telephone notification system was used to phone thousands of households in the surge-prone areas. A few people in other counties (mainly special needs populations) might have received evacuation notices by phone from emergency management officials. More people receiving such calls evacuated than those who did not receive calls as shown in Table 4-7 below. This behavioral parameter was not evaluated in the 1986 study effort.

Table 4-7 Telephone Notification Evacuation Rates

	Beaches	Mainland Surge	Non-Surge
Received Telephone Notification	91	90	N.A.
Heard about Evacuation other ways	84	72	N.A.
Didn't Hear or Didn't Know	74	29	N.A.

f. Perception of Vulnerability

Likelihood of evacuating is often a product of how coastal residents perceive their own vulnerability to hurricanes. A series of questions was asked to assess those perceptions. Respondents were reminded by interviewers that Opal's winds had at one time been 125 mph or greater and were asked the following questions:

1. *Did they believe their home would be at risk to dangerous flooding from storm surge or waves?*

2. *Did they believe that it would be safe to stay in their home, considering both wind and water?*

The results of the answers to these questions are shown in Tables 4-8 through 4-11. Table 4-8 shows that fewer than half of respondents in the beach and mainland surge area felt that their homes would have flooded dangerously. Table 4-9 shows that those who believed their home would flood were more likely to evacuate than those who thought their home would not flood.

Table 4-8 Belief home would be at risk to flooding. (Percent).

	Beaches	Mainland Surge	Non-Surge
Home would flood in Category 3 Storm	49	46	22
Home would not flood in Category 3 Storm	45	51	72
Didn't Know	6	4	7

Table 4-9 Opal Evacuation Rates based on Belief Home would Flood

	Beaches	Mainland Surge	Non-Surge
Home would flood in Category 3 Storm	91	75	42
Home would not flood in Category 3 Storm	78	43	27

Most beach residents and half the mainland surge residents thought their home would have been unsafe in 125 mph winds as shown in Table 4-10. It should also be noted that almost as many non-surge residents (44%) felt that their homes were also unsafe in 125 mph winds. Table 4-11 shows that those believing that their homes were unsafe in 125 mph winds were more likely to evacuate than others. The differences in these participation rates are greater in mainland surge and non-surge areas than in beach areas.

Table 4-10 Belief home would be at risk at 125 mph Winds (percents).

	Beaches	Mainland Surge	Non-Surge
Home would be Unsafe in 125 mph Winds	61	50	44
Home would be Safe in 125 mph Winds	30	42	44
Didn't Know	9	4	13

Table 4-11 Evacuation Rates based on Wind Safety of Home

	Beaches	Mainland Surge	Non-Surge
Home would Unsafe in 125 mph Winds	92	71	38
Home would **Safe** in 125 mph Winds	73	42	25

g. Erin Response Comparison

People who evacuated in Erin earlier in the 1995 hurricane season were more likely to evacuate for Opal than those who did not evacuate for Erin. This is shown in the participation rates in Table 4-12.

Table 4-12 Opal Evacuation Rates based on Erin Evacuation(Percent)

	Beaches	Mainland Surge	Non-Surge
Respondents who evacuated for Erin	96	77	70
Respondents who did **not** evacuate for Erin	80	54	26

h. Response of Mobile Home Residents.

Table 4-13 shows that mobile home residents in the mainland surge and non-surge areas were more likely to evacuate than people living in single-family site built homes. It must be noted that for each county there were few mobile homes in the beach area. The evacuation rates for people living in multi-family structures were not substantially different from those people living in single-family site built homes. One should also note that there were relatively few multi-story structures outside the beach area.

Table 4-13 Opal Evacuation Rates based on Structure Type (Percent)

	Beaches	Mainland Surge	Non-Surge
Evacuation Rate of Mobile Home Residents	84	81	77
Evacuation Rate of SF Site-built Residents	84	55	27

i. Prior Hurricane Experience.

There is little doubt that past hurricane experiences effect how people react to future hurricane events. This experience with hurricanes is related to the length of time residents have lived in coastal hazard areas. Table 4-14 shows how respondents reacted to Opal based on how long they lived in their current residence. While the effect is not strong, the numbers show that, at least in the beach and mainland surge areas, newcomers were more likely than others to evacuate in Opal.

Table 4-14 Opal Evacuation Rates based on Length of Residency (Percent)

	Beaches	Mainland Surge	Non-Surge
Lived in Home Less than 5 Years	92	64	27
Lived in Home Over 20 Years	84	50	23

j. Reasons for not evacuating in Opal.

There are a variety of human characteristics that have been found to cause no differences in evacuation rates in Opal. These include: age, family size, children, pets, race and income. When people were asked why they did not evacuate in Opal, they often tend to overstate some reasons and understate others. Collectively, such responses give an indication of factors which were more or less prominent in peoples minds. Table 4-15 shows the most common responses to that question. Most people who didn't evacuate in Alabama and Escambia and Santa Rosa counties said they felt they were safe. Okaloosa and Walton counties were on the stronger side of the storm which probable is the reason for lower numbers of them feeling their house was safe. The next most common reason for people not evacuating was traffic. Many others said they waited too long to leave or that conditions had become to dangerous to leave. Some said they actually tried to evacuate but gave up and returned home due to traffic. Having a job that required them to stay was the response of a few, with the highest values in Bay county. There were also a few respondents that said they did not evacuate in Opal because they had evacuated in other past hurricanes unnecessarily.

Table 4-15 Reasons for not evacuating in Opal.

	Mobile/ Baldwin	Escambia/ Santa Rosa	Okaloosa/ Walton	Bay
Felt their house was safe	64	54	27	49
Left unnecessarily in the past	0	2	1	7
Had to stay because of job	8	2	7	16
Waited to long to leave	3	14	10	13
Stayed because of traffic problems	7	24	39	28
Tried to evacuate but returned home	0	13	16	4
Conditions to dangerous to leave	2	11	4	5

When asked an open-ended question whether they would do anything differently next time under the same conditions, only 13% of the stayers volunteered that they would leave next time and 12% of the evacuees said they would stay next time. It is likely that both responses would be higher if the respondents were asked specifically if they would or would not evacuate in the future.

k. Participation Rate in Erin

Hurricane Erin threatened Alabama and the Florida Panhandle earlier than Opal in 1995, and made landfall near Pensacola. The evacuation in Erin was much less than in Opal but offers a good example of evacuation in a weak storm. Table 4-16 shows that even in the beach areas, the evacuation participation rate was below a third except for Alabama counties where almost half the respondents evacuated. Evacuation from mainland surge and non-surge locations was generally less than 10 percent, the most notable exception being Escambia and Santa Rosa Counties, where 23 percent left from mainland surge.

Table 4-16 Participation Rate in Erin (Percent)

	Beaches	Mainland Surge	Non-Surge
Mobile/Baldwin	47	12	2
Escambia/Santa Rosa	36	23	10
Okaloosa/Walton	6	4	8
Bay	17	2	5
Average	29	8	6

In beach areas (averaging across the region) 37 percent of the beach respondents, and 22 percent of the mainland surge and non-surge respondents said they heard officials say they should evacuate in Erin (see Table 4-17). Even in the beach areas only 11 percent of the residents thought the notices were mandatory.

Table 4-17 Erin Notice Interpretation (Percent)

	Beaches	Mainland Surge	Non-Surge
Mandatory	11	4	2
Recommended	26	18	20
Didn't Hear or Didn't Know	63	78	78

Table 4-18 shows that in the beach areas, if people thought they heard a mandatory order to evacuate in Erin, 63 percent left, compared to 34 percent if they thought the notice was a recommendation, and 21 percent if they heard no evacuation notice. There were too few evacuees in mainland surge and non-surge locations to analyze those areas separately. For the combined sample (beach + mainland surge + non-surge areas) responses were approximately 10 percentage points lower than in beach areas for each group.

Table 4-18 Erin Participation Rates by Notice Interpretation

	Beaches	Combined Sample All Risk Zones
Mandatory	63	56
Recommended	34	23
Didn't Hear or Didn't Know	21	11

Table 4-19 shows that people who thought their homes would have flooded dangerously were more likely than others to evacuate in Erin. Other factors such as length of residence in the region or in one's present home, age, income, family size, number of children, and race were unimportant in distinguishing those who would evacuate for Erin from those who would stay.

Table 4-19 Erin Evacuation Rates (%) based on Belief Home would Flood

	Beaches	Combined Sample All Risk Zones
Believed home would flood in Category 3 Storm	40	26
Believed home would **not** flood in Category 3 Storm	26	10

I. Responses in Other Hurricanes

The original Tri-state Hurricane Evacuation Study Behavioral Analysis detailed responses in other hurricanes, including Eloise in 1975 and Frederic in 1979. Every hurricane threat is different, so responses vary from storm to storm. The response patterns observed in earlier hurricanes in the region are consistent with those observed in Opal and Erin, however. In Eloise evacuation in the Panama City Beach area was 88 percent, compared to only 55 percent in mainland surge areas, and 47 percent in non-surge areas of Panama City. On Okaloosa Island 95 percent evacuated, and in Destin 75 percent left. These participation rates were significantly greater than the 43 percent who left from Fort Walton Beach and Shalimar.

In Frederic evacuation was much higher in Pensacola (95%) than in Panama City Beach (50%), the latter being on the eastern extreme of the warning area. In both locations people who said they heard evacuation notices from officials were much more likely to evacuate that people who said they heard no official notices. In Gulf Shores and on Dauphin Island in Alabama more than 90 percent evacuated in Frederic. In Mobile in the area advised by officials to leave, 63 percent evacuated, and of those who said they heard officials say to evacuate, 84 percent did so, compared to only 20 percent of those who said they didn't hear. Of those in Mobile who before Frederic believed their homes were subject to flooding, 88 percent left in Frederic, compared to only eight percent who believed their homes would not flood.

In 1985 Hurricane Elena prompted two evacuations in part of the Florida Panhandle, and later in the year Hurricane Kate struck east of Panama City. A sample survey was conducted in Panama City and Panama City Beach to document response in each of the three evacuations. Between 77 percent and 79 percent of the respondents said they evacuated from the beach area in each of the three threats. In Panama City itself participation rates ranged from 48 percent in the first Elena evacuation to 38 percent in Kate.

PLANNING RECOMMENDATIONS

The percentage of region residents who will evacuate during hurricane threats will depend upon several factors, but the most important is whether they believe their safety would be at risk if they stayed in their homes during a hurricane. That belief will be affected by the actual hazardousness of their location (mainly its propensity to flooding from storm surge and battering from waves), whether they have confidence in the protection their own structure will provide against wind and water, and what they believe they hear from public officials during an actual threat.

Table 4 - 20 presents two scenarios: one for a weak hurricane in which evacuation is ordered only in Category 1 surge areas and for all mobile homes, and one for a strong hurricane in which evacuation is ordered at least through Category 3 surge areas as well as for all mobile homes. The figures in the scenarios assume that officials are successful in reaching the public with evacuation notices and strongly advise mobile home residents to leave and go to someplace safer. If they are not, the participation rates will be lower. Many surge zone residents believe their homes would not flood in a Category 3 hurricane. This is especially true in mainland surge areas. One way to overcome misperceptions is by ensuring that everyone in areas needing to evacuate receive evacuation notices from public officials.

Table 4-20. Evacuation participation rates (%) to be used for planning.

	Category 3 Storm Evacuation Ordered in Beach and Mainland Surge Areas and All Mobile Homes			Category 1 Storm Evacuation Ordered in Beach and Category 1 Surge Areas and All Mobile Homes		
	RISK AREA			RISK AREA		
	Beach	Mainland Surge	Non-surge	Beach	Mainland Surge	Non-surge
Non-Mobile Homes	90	85	25	70	50	10
Mobile Homes	95	90	70	90	70	50

EVACUATION TIMING

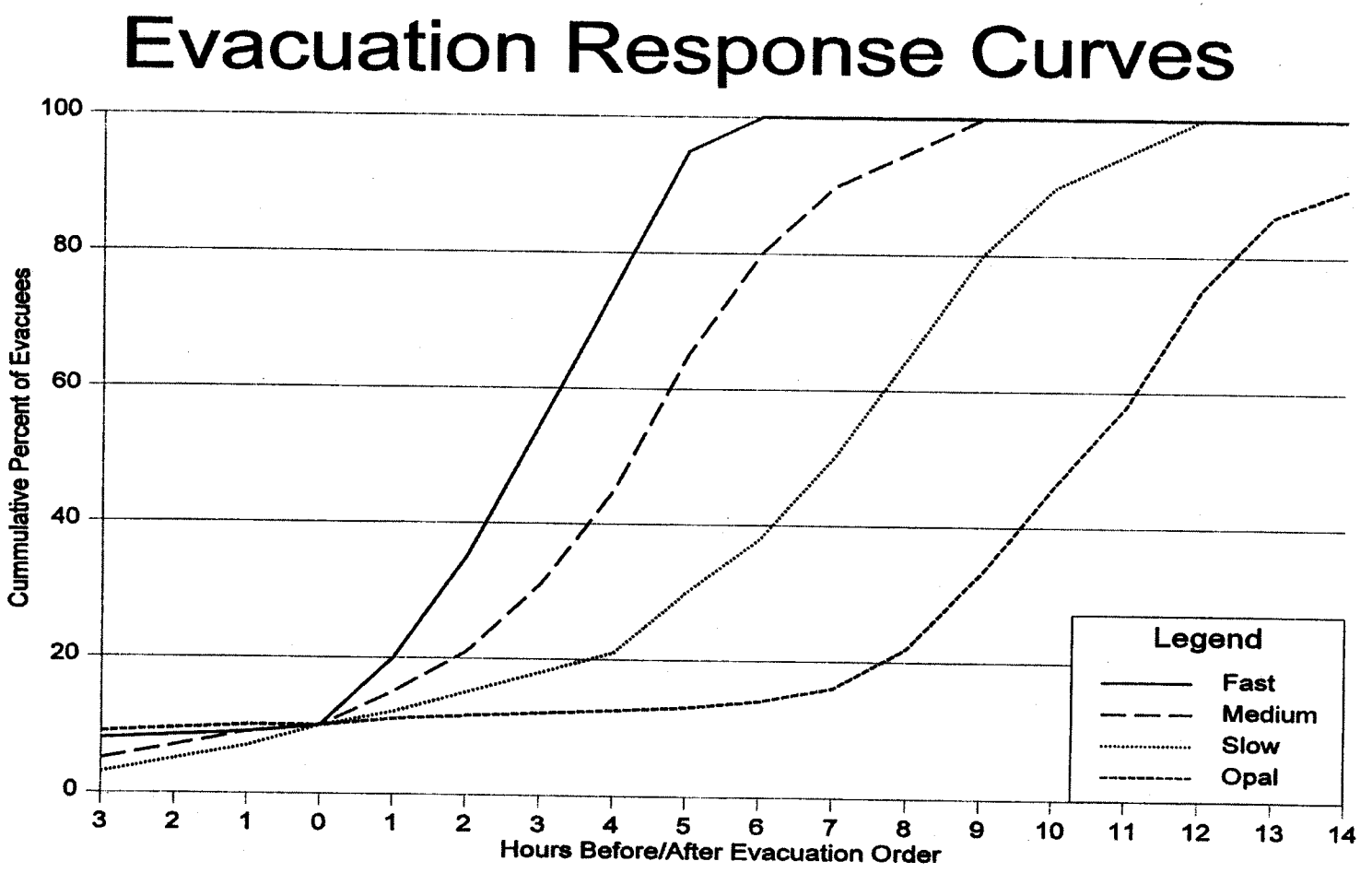
Evacuation timing refers to how promptly evacuees leave their homes to enter the road network. Not everyone leaves at the same time, nor is it necessarily advisable that they do so. Empirical evidence in evacuation after evacuation demonstrates emphatically that the very same people will leave promptly or slowly depending upon the circumstances of the particular threat. When people believe they have the luxury of taking their time to depart, most tend to do so. However, when the urgency of immediate response is communicated to people, they respond very swiftly, even leaving between midnight and daybreak. One other factor is also clear: very few evacuees (less than 20%) leave before officials issue an evacuation notice.

Therefore, people are not going to leave in substantial numbers until someone in a position of authority tells them to and then they will leave as promptly as they are told they must. The urgency of evacuations varies because of the error inherent in hurricane forecasting. If a storm intensifies, increases forward speed, or changes course unexpectedly, it usually becomes more necessary for evacuees to leave quickly, as in Eloise and Opal.

When planning for an evacuation, the three different timing response curves shown in Figure 4 - 1 should be evaluated, because every region will eventually experience all three. In each threat scenario occupants of non-surge areas will tend to wait longer to evacuate than those living in surge-prone locations.

Figure 4 - 1 also shows the response curve for Opal. Approximately 10% of the evacuees said they left before the evacuation order was issued. Few evacuees left during the night after the evacuation order. Seventy percent of the evacuees left between 5 AM and 11 AM on Wednesday, October 4. Looking at the response curve for Opal helps explain the traffic congestion which occurred. Too many people left at the same time. Most people (67%) said they made up their minds to evacuate when they heard the notice. Most people also felt that the evacuation notice meant that they should leave immediately. The others interpreted the notice to mean that they should leave in a range of 6-24 hours. Beach residents were more likely then others to believe the notices meant to leave immediately.

Figure 4-1 Behavioral Response Curve.



TYPE OF REFUGE

Type of refuge refers to whether evacuees go to public shelters, the home of a friend or relatives, hotels, motels or elsewhere. The majority of evacuees in Opal stayed with friends and relatives as shown in Table 4-21 for all counties. Few evacuees went to public shelters in Opal, ranging from 2% to 7%. Table 4-22 shows that more than half of the evacuees in all risk zones said they would stay with friends and relatives. The most notable variation among risk zones is that more evacuees from beach areas went to hotels and motels than evacuees from other risk areas. Generally we have found that more respondents say they will use public shelters than actually do in real evacuations. Most of those saying they would go to public shelters said they had friends and relatives in safe locations where they could stay. The "other" category includes locations such as churches, workplaces and homes (for those being interviewed at vacation residences). It should be noted that behavioral data indicates that almost none of the out of county evacuees will seek public shelter unless they can't find a motel or if there are no shelters provided in their home county and they are instructed to use out of county shelters.

Table 4-21. Type of refuge in Opal, by County (percent)

	Mobile/ Baldwin	Escambia/ Santa Rosa	Okaloosa/ Walton	Bay
Evacuate to Public Shelter	2	5	7	6
Stay with Friend or Relatives	64	61	57	51
Go to a Hotel or Motel	21	22	21	27
Other (such as churches or work place)	13	12	15	16

Table 4-22. Type of Refuge in Opal by Risk Area (percent).

	Beaches	Mainland Surge	Non-Surge
Evacuate to Public Shelter	4	8	3
Stay with Friend or Relatives	58	55	68
Go to a Hotel or Motel	26	18	17
Other (such as churches or work place)	12	20	12

Based on available data, estimates of the percent of evacuees that will seek public shelter are shown in Table 4 - 23. The two most consistent predictors of shelter demand are risk area and income. Evacuees from more hazardous locations tend to use public shelters less than those from inland areas. Poorer people tend to use shelters more than wealthier people.

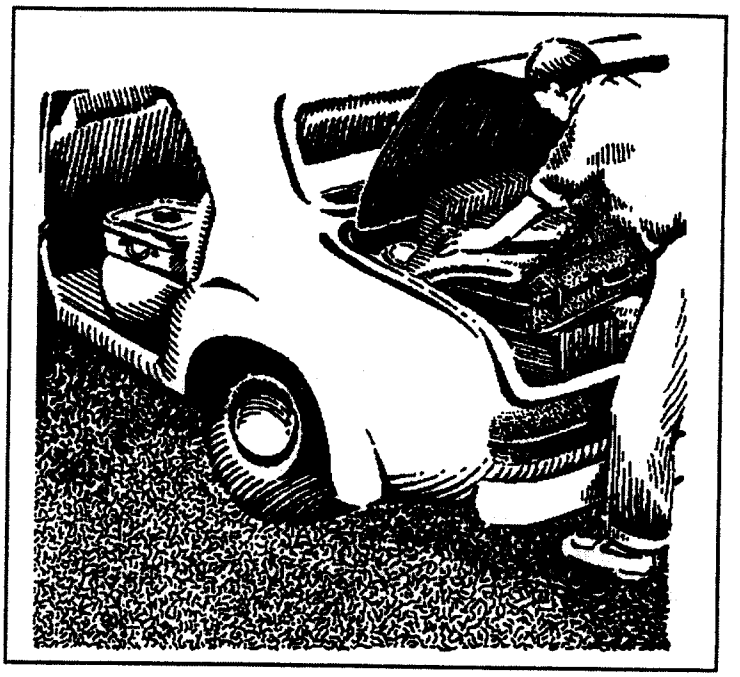
Table 4-23. Public shelter use rates for evacuation planning (percent).

Income	Beaches	Mainland Surge	Non-Surge
High Income	5	5	5
Medium Income	5	10	15
Low Income	10	15	25

In Erin and Opal few people in any group used public shelters. The low shelter use rates in Opal probably occurred in part because so many evacuees left the local area. In Erin the low use rate s probably were due to the low overall participation rates.

EVACUATION DESTINATIONS

a. Refuge Locations



In Opal most evacuees left their own county as shown in Table 4-24. Table 4-25 shows that the evacuees by risk area going out of county were very similar to each other and to the county percentages. State destinations of evacuees leaving their own county are shown in Table 4-26. Almost all the Alabama evacuees leaving their county went elsewhere in Alabama or to Mississippi. Escambia and Santa Rosa evacuees were about evenly divided between Florida and Alabama with a few going to Mississippi and Georgia. This pattern was similar for Okaloosa and Walton Counties.

Table 4-24 Location of refuge in Opal, by County (percent)

	Mobile/ Baldwin	Escambia/ Santa Rosa	Okaloosa/ Walton	Bay
Stayed in their own Neighborhood	5	7	15	6
Stayed within their own County	33	29	20	21
Left their own County for shelter	62	64	65	73

Table 4-25. Location of refuge in Opal, by Risk Area (percent)

	Beaches	Mainland Surge	Non-Surge
Stayed in their own Neighborhood	5	10	18
Stayed within their own County	27	24	25
Left their own County for shelter	68	66	57

Table 4-26. State Destinations in Opal by County (percents)

Destination	Mobile/ Baldwin	Escambia/ Santa Rosa	Okaloosa/ Walton	Bay
Evacuated to Florida	6	39	34	47
Evacuated to Alabama	57	37	44	34
Evacuated to Georgia	0	6	5	18
Evacuated to Mississippi	30	10	9	0
Evacuated to Other State	8	8	7	0
Did not Know	0	0	1	1

b. Destination Changes During Opal

Due to the traffic congestion during the Opal evacuation some evacuees changed their destination after leaving. In Alabama 16% changed their destination and in Bay County Florida 34% of evacuees changed their destination. Table 4-27 shows the top four reasons why people changed their destination while evacuating in Opal by County and Table 4-28 shows the same information by risk zone. Traffic congestion was the primary reason for changing destinations.

Table 4-27. Reasons for changing destination during Opal by County. (Percent)

Destination	Mobile/ Baldwin	Escambia/ Santa Rosa	Okaloosa/ Walton	Bay
Traffic Congestion	53	67	41	35
Storm getting to close	12	31	19	13
Storm getting to strong	12	14	26	13
Motels were full	24	11	7	33

Table 4-28. Reasons for changing destination during Opal by Risk Zone. (percent)

Destination	Beach	Mainland Surge	Non-Surge
Traffic Congestion	53	42	33
Storm getting to close	16	25	22
Storm getting to strong	17	17	0
Motels were full	23	14	11

c. Destination Travel Times During Opal

Table 4-29 shows the times it took evacuees to get to their destinations. Time required to reach eventual destinations was shortest in Alabama, where 48 percent reached refuge in an hour or less. In Escambia and Santa Rosa 39 percent took and hour or less, but in the other Florida locations only 21 percent (Okaloosa/Walton) and 27 percent (Bay) consumed such short travel times. In Florida more than 20 percent of all evacuees required at least eight hours to reach their destinations. Mainland surge area evacuees took longer than both beach and non-surge evacuees to reach their destinations as shown in Table 4-30.

Table 4-29. Time required to reach destination during Opal by County. (percent)

Destination	Mobile/ Baldwin	Escambia/ Santa Rosa	Okaloosa/ Walton	Bay
Less than 1 hour	48	39	21	27
1 hour to 4 hours	25	19	19	25
4 hours to 8 hours	16	20	39	24
More than 8 hours	11	21	21	24

Table 4-30. Time required to reach destination during Opal by Risk Zone. (percent)

Destination	Beach	Mainland Surge	Non-Surge
Less than 1 hour	53	42	33
1 hour to 4 hours	16	25	22
4 hours to 8 hours	17	17	0
More than 8 hours	23	14	11

Approximately half of all evacuees said their evacuation required more time than anticipated, ranging from a low of 46 percent in Alabama to a high of 60 percent in Okaloosa/Walton. Mainland surge respondents were more likely than others to say their trips took longer than expected.

The vast majority (88% to 97%) of evacuees who said their evacuation took longer than expected attributed the delay to heavy traffic (Table 4-31). Some also mentioned that too many people left at the same time, which is a way of explaining the traffic congestion. Weather, Highway construction, and poor traffic management were also mentioned more frequently than other factors. There was substantial variation among responses from one jurisdiction to another. Traffic was also cited overwhelmingly by respondents in all risk areas (Table 4-32).

Table 4-31. Reason trip took longer during Opal by County. (percent)

Reason	Mobile/ Baldwin	Escambia/ Santa Rosa	Okaloosa/ Walton	Bay
Traffic congestion	88	97	96	93
Too many people left at the same time	16	10	9	25
Roadway construction	2	20	14	4
Bad weather	33	11	19	11
Poor Management	6	12	12	16

Table 4-32. Reason trip took longer during Opal by Risk Zone. (percent)

Reason	Beach	Mainland Surge	Non-Surge
Traffic congestion	93	95	97
Too many people left at the same time	16	10	23
Roadway construction	11	12	7
Bad weather	13	26	37
Poor Management	8	10	11

In Erin evacuees traveled much shorter distances than in Opal. Two-third's of all Erin evacuees went to destinations within their own county, and 30 percent went someplace in their own neighborhood.

d. Destination Assumptions for Use in Planning

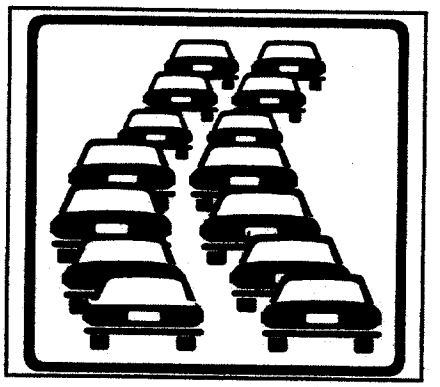
Out-of-county evacuation behavior is highly variable from one location to the next, although there appears to be much consistency within the Tri-state study area. Alabama beach areas in particular appear more likely to go out-of-county than other locations, due to a relative absence of safe refuge options within their counties. It is normal for more evacuees from high-risk locations to go out of county than from moderate-risk locations and more from moderate-risk location than from inland locations. Evacuees in higher risk locations tend to leave earlier and tend to be wealthier (therefore being more able to afford hotels and motels).

Table 4-33. Percentage of evacuees going out-of-county for use in Planning

RISK AREA	Cat 3 Storm	Cat 1 Storm
Beaches	65	50
Mainland Surge	55	35
Non-surge	40	15

These figures should not be confused with participation rates. The percent of residents evacuating from each of the areas will vary. To each of the participation rates indicated earlier, the out-of-county destination rate should be applied.

VEHICLE USAGE



Transportation modeling requires knowledge of the number of vehicles evacuating, more than the number of people. Also some vehicles such as trailers and motor homes impact traffic flow more than other vehicles. Finally emergency management officials need to anticipate the number of people who will need their assistance in order to evacuate.

Not all available vehicles are used in evacuations, in part because households prefer not to separate their family more than necessary. The percentage of available vehicles used in Opal varied between 62 percent and 68 percent across county groups. A slightly greater percentage of available vehicles were taken from beach areas (70%) than other risk areas. The number of vehicles per evacuating household ranged from 1.16 to 1.36. The 1998 behavioral study done for the Tri-State study showed that of the vehicles available to evacuees, 73% would be used in Alabama and 61% would be used in Florida.

Few evacuees pulled trailers or took motor homes. In Bay County 7.5% took such vehicles, and in Okaloosa/Walton only 2.5% did so. There was no discernible pattern of variation across risk zones. Pulling trailers (usually for boats) and taking motor homes can vary widely from place to place. A 5% rate is the lowest which should probably be used for planning, due to the fact that more evacuees would probably have taken their boats if they had more time to prepare for the evacuation in Opal.

Approximately 6% of surveyed households said someone required assistance evacuating. In almost all cases respondents said the assistance was provided by friends or relatives.

Vehicle use figures vary little from place to place or from evacuation to evacuation. Moreover, vehicles use is one of the few behaviors which can be predicted accurately solely with hypothetical response data. For planning purposes it should be assumed that between 65% and 75% of the available vehicles will be used throughout the study area.

STATEWIDE BEHAVIORAL COMPARISONS

The following table shows comparisons of evacuation participation and refuge destination for various Regional Planning Councils (RPC) in Florida.

Table 4-34 Behavioral Comparison for Planning Regions in Florida (Provided in Percent %)

	Public Shelter	Friend/ Relative	Hotel or Motel	Out of County	Don't Know	Other
NWFRPC Current						
Escambia/Santa Rosa Co.	5	61	22	-	-	12
Okaloosa/ Walton Co.	7	57	21	-	-	15
Bay County	6	51	27	-	-	16
NWFRPC 1986 study	15	25	5	55	-	0
SWFRPC	24	13	4	34	21	4
Lee County	22	30	16	-	4	28
TBRPC						
Surge-zones	25	53	11	11	-	0
Mobile Homes	35	50	5	10	-	0
Tourists	15	7	8	70	-	0
Non-Surge zones	26	57	9	8	-	0
CFRPC						
Polk	47	14	-	-	25	14
Hardee	37	25	-	-	26	12
Okeechobee	36	22	-	-	24	18
Highlands	53	12	-	-	29	6
Desoto	46	16	-	-	29	9

Table 4-34 Behavioral Comparison for Planning Regions in Florida(continued)
(Provided in Percent %)

	Public Shelter	Friend/ Relative	Hotel or Motel	Out of County	Don't Know	Other
SFRPC						
Dade/Broward/Palm Beach	20	38	14	-	4	24
Monroe Co.	16	44	25	-	3	12
TCRPC	50	29	11	-	-	10
ECFRPC						
Coastal	18	38	31	-	13	0
Inland	46	18	14	-	22	0
NEFRPC	33	42	15	-	10	0
WRPC						
Coastal	26	34	24	-	16	0
Inland	40	14	20	-	26	0
NCRPC						
Coastal	54	30	16	-	-	0
Inland	42	42	16	-	-	0
ARPC						
Gulf	38	47	9	-	6	0
Franklin	21	53	19	-	7	0
Wakulla	28	40	19	-	13	0
						100

SHELTER ANALYSIS

CHAPTER FIVE - SHELTER ANALYSIS

PURPOSE

The general purpose of the shelter analysis is to estimate the number of evacuees that will seek public shelter and determine the number of shelter spaces available. This information is used by County and State emergency management offices to develop a management plan for shelter operation to insure that the evacuees seeking public shelter will have adequate and safe shelter space. The shelter data is also used in the transportation analysis to calculate clearance times. The transportation analysis is covered in Chapter 6.

SHELTER ANALYSIS

The shelter analysis discusses shelter locations, vulnerability, capacity, and demand. Data developed in the hazards, vulnerability and behavioral analyses were used to evaluate shelter criteria. It is important to note that the identification of a shelter in this report does not indicate that the facility will be used in a given hurricane evacuation. The choice of public shelters for a specific evacuation is a County and State emergency management decision. Shelters will be opened by county and municipal authorities based on a variety of circumstances including season, storm intensity, and direction, and availability of qualified shelter operators, including American Red Cross (ARC) personnel. Furthermore, shelter designation may change based on new construction, structure modifications, ownership changes or other factors impacting shelter selection. The following paragraphs will discuss shelter vulnerability, shelter demand (number of evacuees seeking public shelter) and shelter inventories and capacities. This portion of the report will be periodically updated by County or State offices to reflect current shelter inventories.

SHELTER VULNERABILITY

Criteria contained in ARC publication 4496, Guidelines for Hurricane Evacuation Shelter Selection, dated July 1992, is a good tool to predesignate shelters within the study area. The ARC offices of emergency management have reviewed the areas of potential flooding shown on the inundation maps and will usually only open shelters located outside of any potential hurricane surge flood area. **It is vitally important that any government or private entity intending to operate a public hurricane shelter carefully consider the ARC guidelines and ensure that the shelter is above any storm surge elevations.**

SHELTER DEMAND

Public shelter demand (number of evacuees seeking public shelter) has been calculated for several hurricane evacuation scenarios for each county. These evacuation zone scenarios are discussed for each county in Chapter 3. Generally the percent of evacuees planning to use public shelters ranges from 5-15 % depending upon their risk zone, the storm intensity and their income. Tables 5-1 through 5-3 show the shelter demand for each coastal county by evacuation scenario. No out-of-county evacuees are expected to seek shelter in the coastal counties. The analysis assumes an adequate warning period for an approaching hurricane and sufficient public knowledge concerning the locations of shelters.

Table 5-1 Washington and Holmes Shelter Use Data
by Evacuation Scenario

	Total Evacuating People	Evacuees Going to in-county Shelters	% of Evacuees Going to in-county Shelters	Shelter space need or surplus
WASHINGTON COUNTY	Total Available Shelter Capacity			**1,208**
Category 1 low tourist occupancy	5,600	1,100	20	108
Category 1 high tourist occupancy	5,600	1,100	20	108
Category 2/3 low tourist occupancy	6,250	1,250	20	(42)
Category 2/3 high tourist occupancy	6,250	1,250	20	(42)
Category 4/5 low tourist occupancy	6,900	1,400	20	(192)
Category 4/5 high tourist occupancy	6,900	1,400	20	(192)
HOLMES COUNTY	Total Available Shelter Capacity			**999**
Category 1 low tourist occupancy	5,100	1,000	20	(1)
Category 1 high tourist occupancy	5,100	1,000	20	(1)
Category 2/3 low tourist occupancy	5,700	1,140	20	(141)
Category 2/3 high tourist occupancy	5,700	1,140	20	(141)
Category 4/5 low tourist occupancy	6,300	1,300	21	(301)
Category 4/5 high tourist occupancy	6,300	1,300	21	(301)

Table 5-2 Escambia, Santa Rosa and Okaloosa Shelter Use Data
by Evacuation Scenario

	Total Evacuating People	Evacuees Going to in-county Shelters	% of Evacuees Going to in-county Shelters	Shelter space (need) or surplus
ESCAMBIA COUNTY	Total Available Shelter Capacity			**20,340**
Category 1 low tourist occupancy	60,257	6,254	10	14,086
Category 1 low tourist (realistic)	40,265	3,900	10	16,440
Category 1 high tourist occupancy	63,851	6,436	10	13,904
Category 2/3 low tourist occupancy	91,595	10,044	11	10,296
Category 2/3 high tourist occupancy	96,023	10,263	11	10,077
Category 4/5 low tourist occupancy	136,985	15,426	11	4,914
Category 4/5 high tourist occupancy	147,030	16,279	11	4,061
Category 4/5 high tourist (realistic)	140,549	16,011	11	4,329
SANTA ROSA COUNTY	Total Available Shelter Capacity			**8,150**
Category 1 low tourist occupancy	39,402	4,047	10	4,103
Category 1 low tourist (realistic)*	26,258	2,495	10	5,655
Category 1 high tourist occupancy	40,880	4,122	10	4,028
Category 2/3 low tourist occupancy	48,352	5,030	10	3,120
Category 2/3 high tourist occupancy	49,857	5,106	10	3,044
Category 4/5 low tourist occupancy	65,598	7,064	11	1,086
Category 4/5 high tourist occupancy	67,424	7,154	11	996
Category 4/5 high tourist (realistic)*	59,110	6,275	11	1,875
OKALOOSA COUNTY	Total Available Shelter Capacity			**8,050**
Category 1 low tourist occupancy	42,031	4,161	10	3,889
Category 1 low tourist (realistic)*	32,026	2,934	9	5,116
Category 1 high tourist occupancy	57,928	4,955	9	3,095
Category 2/3 low tourist occupancy	68,100	6,858	10	1,192
Category 2/3 high tourist occupancy	88,382	7,873	9	177
Category 4/5 low tourist occupancy	110,004	11,696	11	(3,646)
Category 4/5 high tourist occupancy	131,300	12,760	10	(4,710)
Category 4/5 high tourist (realistic)*	117,906	11,509	10	(3,459)

* The (realistic) scenarios used participation rates less than 100%.
Note: The Escambia total available shelter capacity shown has been reduced by 5,120 spaces for shelter workers.

Table 5-3 Walton and Bay Shelter Use Data
by Evacuation Scenario

	Total Evacuating People	Evacuees Going to in-county Shelters	% of Evacuees Going to in-county Shelters	Shelter space need or surplus
WALTON COUNTY	Total Available Shelter Capacity			**5,620**
Category 1 low tourist occupancy	19,986	1,850	9	3,770
Category 1 low tourist (realistic)*	13,932	1,181	8	4,439
Category 1 high tourist occupancy	27,167	2,208	8	3,412
Category 2/3 low tourist occupancy	28,507	2,526	9	3,094
Category 2/3 high tourist occupancy	44,572	3,328	7	2,292
Category 4/5 low tourist occupancy	30,246	2,773	9	2,847
Category 4/5 high tourist occupancy	46,311	3,575	8	2,045
Category 4/5 high tourist (realistic)*	42,826	3,197	7	2,423
BAY COUNTY	Total Available Shelter Capacity			**12,798**
Category 1 low tourist occupancy	60,074	5,525	9	7,273
Category 1 low tourist (realistic)*	43,344	3,730	9	9,068
Category 1 high tourist occupancy	87,017	6,875	8	5,923
Category 2/3 low tourist occupancy	96,990	9,091	9	3,707
Category 2/3 high tourist occupancy	138,288	11,157	8	1,641
Category 4/5 low tourist occupancy	126,335	12,113	10	685
Category 4/5 high tourist occupancy	178,482	14,722	8	(1,924)
Category 4/5 high tourist (realistic)*	160,939	12,936	8	(138)

* The (realistic) scenarios used participation rates less than 100 %.

SHELTER DEMAND OUTSIDE THE STUDY AREA

Many of the evacuees from the coastal counties will be leaving their county for refuge farther inland. The behavioral studies in Chapter 4 give estimates of destinations of evacuees from the region during Opal. The destinations of evacuees from coastal counties used in this study are discussed in the transportation analysis in Chapter 6. Table 5-4 summarizes the destination percentage estimates by coastal county and State destination.

Table 5-4 State Destination Percentages by County

Destination State	Escambia	Santa Rosa	Okaloosa	Walton	Bay
Other Florida	35	35	35	35	40
Alabama	45	45	45	45	40
Georgia	5	5	5	5	15
Mississippi	15	15	15	15	5
Total	100	100	100	100	100

The percentages shown in Table 5-4 were applied to the total number out-of-county evacuees for each coastal county to determine the total number of evacuees heading for each State. Tables 5-5 through 5-7 show the number of evacuees leaving each coastal county and their State destination.

Table 5-5 Evacuee State Destination by County for Cat. 1

	Total	Other	Alabama	Georgia	Mississippi
Cat. 1 low tourist occupancy					
Escambia	19,130	6,696	8,609	957	2,870
Santa Rosa	9,458	3,310	4,256	473	1,419
Okaloosa	17,191	6,017	7,736	860	2,579
Walton	8,322	2,913	3,745	416	1,248
Bay	24,765	8,668	9,906	3,715	1,238
Total	78,866	27,603	34,251	6,420	9,353
Cat. 1 high tourist occupancy					
Escambia	22,545	7,891	10,145	1,127	3,382
Santa Rosa	10,863	3,802	4,888	543	1,629
Okaloosa	32,294	11,303	14,532	1,615	4,844
Walton	15,146	5,301	6,816	757	2,272
Bay	50,357	17,625	20,143	7,554	2,518
Total	131,205	45,922	56,524	11,596	14,645

Table 5-6 Evacuee State Destination by County for Cat. 2-3

	Total Evacuees	Other Florida	Alabama	Georgia	Mississippi
Cat. 2-3 low tourist occupancy					
Escambia	36,557	12,795	16,451	1,828	5,484
Santa Rosa	16,160	5,656	7,272	808	2,424
Okaloosa	32,785	11,475	14,753	1,639	4,918
Walton	15,761	5,516	7,092	788	2,364
Bay	48,435	16,952	19,374	7,265	2,422
Total	149,698	52,394	64,942	12,328	17,611
Cat. 2-3 high tourist occupancy					
Escambia	40,763	14,267	18,343	2,038	6,114
Santa Rosa	17,587	6,155	7,914	879	2,638
Okaloosa	52,053	18,219	23,424	2,603	7,808
Walton	31,022	10,858	13,960	1,551	4,653
Bay	87,670	30,685	35,068	13,151	4,384
Total	229,095	80,183	98,709	20,222	25,597

Table 5-7 Evacuee State Destination by County for Cat. 4-5

	Total Evacuees	Other Florida	Alabama	Georgia	Mississippi
Cat. 4-5 low tourist occupancy					
Escambia	69,451	24,308	31,253	3,473	10,418
Santa Rosa	27,079	9,478	12,186	1,354	4,062
Okaloosa	60,849	21,297	27,382	3,042	9,127
Walton	18,709	6,548	8,419	935	2,806
Bay	73,726	25,804	29,490	11,059	3,686
Total	249,814	87,435	108,730	19,863	30,099
Cat. 4-5 high tourist occupancy					
Escambia	77,072	26,975	34,682	3,854	11,561
Santa Rosa	28,814	10,085	12,966	1,441	4,322
Okaloosa	81,080	28,378	36,486	4,054	12,162
Walton	33,971	11,890	15,287	1,699	5,096
Bay	123,266	43,143	49,306	18,490	6,163
Total	344,203	120,471	148,728	29,537	39,304

Based on historical behavioral studies it is estimated that the percentage of evacuees planning to go to inland county shelters ranges from 15-30%. Tables 5-8 through 5-10 shows the estimated shelter demand for each State from coastal county evacuees for different evacuation scenarios based on 20% of the out-of-county evacuees seeking public shelters.

Table 5-8 Coastal County Evacuees Seeking Shelter Out-of-Region for Cat. 1

	Total	Other Florida	Alabama	Georgia	Mississippi
Cat. 1 low tourist occupancy					
Escambia	3,826	1,339	1,722	191	574
Santa Rosa	1,892	662	851	95	284
Okaloosa	3,438	1,203	1,547	172	516
Walton	1,664	583	749	83	250
Bay	4,953	1,734	1,981	743	248
Total	15,773	5,521	6,850	1,284	1,871
Cat. 1 high tourist occupancy					
Escambia	4,509	1,578	2,029	225	676
Santa Rosa	2,173	760	978	109	326
Okaloosa	6,459	2,261	2,906	323	969
Walton	3,029	1,060	1,363	151	454
Bay	10,071	3,525	4,029	1,511	504
Total	26,241	9,184	11,305	2,319	2,929

Table 5-9 Coastal County Evacuees Seeking Shelter Out-of-Region for Cat. 2-3

	Total	Other Florida	Alabama	Georgia	Mississippi
Cat. 2-3 low tourist occupancy					
Escambia	7,311	2,559	3,290	366	1,097
Santa Rosa	3,232	1,131	1,454	162	485
Okaloosa	6,557	2,295	2,951	328	984
Walton	3,152	1,103	1,418	158	473
Bay	9,687	3,390	3,875	1,453	484
Total	29,940	10,479	12,988	2,466	3,522
Cat. 2-3 high tourist occupancy					
Escambia	8,153	2,853	3,669	408	1,223
Santa Rosa	3,517	1,231	1,583	176	528
Okaloosa	10,411	3,644	4,685	521	1,562
Walton	6,204	2,172	2,792	310	931
Bay	17,534	6,137	7,014	2,630	877
Total	45,819	16,037	19,742	4,044	5,119

Table 5-10 Coastal County Evacuees Seeking Shelter Out-of-Region for Cat. 4-5

	Total	Other Florida	Alabama	Georgia	Mississippi
Cat. 4-5 low tourist occupancy					
Escambia	13,890	4,862	6,251	695	2,084
Santa Rosa	5,416	1,896	2,437	271	812
Okaloosa	12,170	4,259	5,476	608	1,825
Walton	3,742	1,310	1,684	187	561
Bay	14,745	5,161	5,898	2,212	737
Total	49,963	17,487	21,746	3,973	6,020
	0	0	0	0	0
Cat. 4-5 high tourist occupancy	0	0	0	0	0
Escambia	15,414	5,395	6,936	771	2,312
Santa Rosa	5,763	2,017	2,593	288	864
Okaloosa	16,216	5,676	7,297	811	2,432
Walton	6,794	2,378	3,057	340	1,019
Bay	24,653	8,629	9,861	3,698	1,233
Total	68,841	24,094	29,746	5,907	7,861

SHELTER INVENTORIES AND CAPACITIES

Tables 5-11 through 5-18 on the following pages provide an inventory of potential hurricane evacuation shelters and capacities by county, that might be used during an evacuation. This shelter information was provided by the Counties and the State of Florida and is periodically updated in their Florida Statewide Sheltering Plan. The tables show the shelter name, address, city, capacity as the number of evacuees it can accommodate, the hurricane surge category it is located in shown under CAT. column as 1-5 or a "0" meaning they are not in one of the 5 hurricane surge areas and the latitude and longitude of the facility if available. All facilities are operated by the American Red Cross unless noted at the bottom of the table. None of the counties have indicated that any shelters would allow pets.

Table 5-11 List of Potential Hurricane Shelters in Escambia County

No.	NAME	ADDRESS	CITY	CAPACITY	SQ_FEET	CAT.*	Latitude	Longitude
1	Bailey M.S.	4110 Bauer Rd.	Pensacola	1000	20000	0	30.346667	-87.403611
2	Bellview Elem.	4425 Bellview Ave	Pensacola	500	10000	0	30.467500	-87.306944
3	Bellview M.S.	6201 Mobile Hwy	Pensacola	750	15000	0	30.464167	-87.304167
4	Beulah Elem	6201 Helms Rd.	Pensacola	500	10000	0	30.504444	-87.356944
5	Brentwood M.S.	201 Hancock Lane	Pensacola	500	10000	0	30.650833	-87.241944
6	Brownsville M.S.	3700 W. Avery St.	Pensacola	750	15000	0	30.430556	-87.258056
7	Carver M.S.	700 E. Hecker Rd.	Century	500	10000	0	30.972778	-87.253889
8	Ernest Ward M.S.	7650 Hwy 97	Walnut Hill	500	10000	0	30.898889	-87.478611
9	Ferry Pass M.S.	8355 Yancy Ave.	Pensacola	750	15000	0	30.513056	-87.196944
10	Helen Caro Elem.	12551 Meadson Rd.	Pensacola	1000	20000	5	30.346111	-87.406944
11	Jim Allen Elem.	1051 Hwy 95A	Cantonment	500	10000	0	30.450000	-87.224444
12	Lipscomb Elem	10200 Ashton Brosnaham Dr.	Pensacola	1000	20000	0	30.555000	-87.269722
13	Northview H.S.	4100 W. Hwy. 4	Century	1500	30000	0	30.966667	-87.406944
14	Olive Baptist Church***	1836 E. Olive Rd.	Pensacola	300	6000	0	30.478056	-87.205278
15	Pine Meadow Elem.	10001 Omar Ave.	Pensacola	500	10000	0	30.546667	-87.284722
16	Ransom M.S.	1000 W. Kingsfield	Cantonment	1000	20000	0	30.580833	-87.341944
17	Scenic Heights Elem	3801 Cherry Laurel Dr.	Pensacola	350	7000	0	30.489722	-87.176944
18	Sherwood Elem	501 Cherokee Trail	Pensacola	350	7000	0	30.436389	-87.290556
19	Warrington M.S.	450 S. Old Corry Rd.	Pensacola	600	12000	0	30.404167	-87.274167
20	Washington H.S.	6000 College Pkwy	Pensacola	2000	40000	0	30.483056	-87.215000
21	Wedgewood M.S.	6420 Pinestead Rd.	Pensacola	750	15000	0	30.491667	-87.248611
22	Woodham H.S.	150 E. Burgess Rd.	Pensacola	2000	40000	0	30.497500	-87.248056
23	Workman M.S.	6266 Lanier Dr.	Pensacola	860	17200	0	30.487778	-87.204167
24	Pensacola Junior College	1000 College Blvd	Pensacola	1500	30000	0	30.624444	-87.323333
25	East Brent Baptist Church	4801 N. Davis Highway	Pensacola	1500	30000	0	30.511944	-87.220556
26	Longleaf Elementary Schoo	2600 Longleaf Drive	Pensacola	1000	20000	0	30.486820	-87.296870
27	Pine Forest high School	2500 Longleaf Drive	Pensacola	2000	40000	0	30.486820	-87.291960
28	Beggs Vocational School	2404 Longleaf Drive	Pensacola	1000	20000	0	30.486390	-87.288620
		Total Shelter spaces		25460				

Note: The Escambia total available shelter capacity shown as 25,460 includes 5,120 spaces that will be used by shelter workers.

* "0"means shelter is not in surge area. *** Indicates this is a special needs shelter.

Table 5-12 List of Potential Hurricane Shelters in Santa Rosa County

No.	SHELTER	ADDRESS	CITY	CAPACITY	SQ_FEET	CAT.*	Latitude	Longitude
1	Milton H.S.	103 N.E. Stewart St.	Milton	1,000	20,000	0	30.37.56	87.02.39
2	Pace H.S.	4065 Norris Rd.	Pace	950	19,000	0	30.36.52	87.09.13
3	Berryhill Elem.	5330 Berryhill Rd.	Milton	1,000	20,000	0	30.38.49	87.05.58
4	King M.S.	2400 Stewart St.	Milton	1,000	20,000	0	30.38.59	87.02.39
5	Jay H.S.	4955 Alabama St.	Jay	1,000	20,000	0	30.56.28	87.89.22
6	Central H.S.	6180 Central School	Allentown	1,000	20,000	0	30.45.51	87.04.34
7	Locklin Vo-Tech	5330 Berryhill Rd.	Milton	600	12,000	0	30.38.49	87.05.58
8	Pea Ridge Elem	4775 School St.	Pace	600	12,000	0	30.36.29	87.06.42
9	Hobbs M.S.	309 Glover Lane, S.W.	Milton	500	10,000	0	30.37.44	87.03.52
10	Chumuckla Elem.	2312 Hwy 182	Jay	500	10,000	0	30.46.45	87.13.20
			TOTAL	**8,150**	**163,000**			

Note: The Berryhill Elementary School will be run by the County Health Department. All the other shelters are run by the Citizen Advisory Committee for Disaster Preparedness (CACDP). None of our Shelters allow Pets.
* "0"means shelter is not in surge area.

Table 5-13 List of Potential Hurricane Shelters in Okaloosa County

No.	NAME	ADDRESS	CITY	CAPACITY	SQ FEET	CAT.*	Latitude	Longitude
1	Baker H.S.	1369 14th Street	Baker	600	12,000	0	30.7933	-86.6798
2	Bruner M.S.	322 NW Holmes Blvd	Ft Walton Beach	700	14,000	0	30.4188	-86.6363
3	Choctawhatchee HS	110 NW Racetrack Rd.	Ft Walton Beach	1,300	26,000	0	30.4492	-86.6216
4	Crestview H.S.	1304 N. Ferdon Blvd.	Crestview	1,500	30,000	0	30.7900	-86.5583
5	First Baptist Church	444 Hwy 190	Valparaiso	150	3,000	0	30.5098	-86.4930
6	Laurel Hill H.S.	8078 4th Street	Laurel Hill	500	10,000	0	30.9665	-85.4587
7	Addie Lewis Middle	281 Miss. Ave.	Valparaiso	750	15,000	0	30.4932	-86.4932
8	Niceville H.S.	800 E. John Sims Pky	Niceville	1,500	30,000	0	30.5195	-86.4774
9	Longwood	50 Holly Dr	Shalimar	750	15,000	0	30.4605	-86.5827
10	Shalimar Elem	1350 Joe Martin Cr.	Shalimar	300	6,000	0	30.4495	-86.5752
			TOTAL	8,050	161,000			

NOTE: American Red Cross staffs public shelters in Okaloosa County. County Health Dept. nurses staff Special Needs Units. There is sufficient staff available for 72 hours...after that time outside assistance is needed for relief.
* "0"means shelter is not in surge area.

Table 5-14 List of Potential Hurricane Shelters in Walton County

No.	SHELTER	ADDRESS	CITY	CAPACITY	SQ_FEET	CAT.*	LATITUDE	LONGITUDE
1	Defuniak Springs Comm. Center	361 N. 10th St.	DeFuniak Spr.	200	4,000	0	30.72679	86.11639
2	Freeport H.S.	380 Kylea Laird Dr.	Freeport	200	4,000	0	30.5009	86.13306
3	Maude Saunders Elem	416 John Baldwin	DeFuniak Spr.	1,150	23,000	0	30.75014	86.12612
4	Paxton H.S.	21893 US 331 N.	Paxton	300	6,000	0	30.97845	86.30575
5	Walton H.S.	555 Walton Rd.	DeFuniak Spr.	1,340	26,800	0	30.74264	86.12649
6	Walton M.S.	625 Park Ave.	DeFuniak Spr.	1,700	34,000	0	30.71297	86.11372
7	West DeFuniak Elem	815 Lincoln St.	DeFuniak Spr.	730	14,600	0	30.72394	86.13857
			TOTAL	**5,620**	**112,400**			

Note: All Walton County shelters are staffed by the American Red Cross(ARC), Health Department Nurses and ARES members.. all coordinated through the ARC. * "0"means shelter is not in surge area

Table 5-15 List of Potential Hurricane Shelters in Bay County

No.	NAME	ADDRESS	CITY	CAPACITY	SQ_FEET	CAT.*	Latitude	Longitude
1	Bay H.S.	1204 Harrison Ave.	Panama City	2404	48080	0	30.17000	-85.65972
2	Callaway Elem.	7115 State Route 22	Callaway	972	19440	0	30.24417	-85.61806
3	Hiland Park Elem.	2507 E. Baldwin Rd.	Panama City	809	16180	0	30.20250	-85.62806
4	M. Brown M.S.	5601 Merrit Brown R	Panama City	1100	22000	0	30.24361	-85.56167
5	Millville Elem.	203 N. East Ave.	Millville	455	9100	0	30.15056	-85.62528
6	Mosley H.S.	3418N.Palo Alto Ave	Hiland Park	1605	32100	0	30.21028	-85.64389
7	Northside Elem.	2001 Northside Dr.	Panama City	1462	29240	0	30.24056	-85.56194
8	Rutherford H.S.	1000 School Ave.	Panama City	2411	48220	0	30.16639	-85.61583
9	Tommy Smith Elem.	5519 Merrit Brown R	Panama City	1280	25600	0	30.24000	-85.56417
10	Waller Alt. EOC	11332 E.Hwy 388	Youngstown	0	0	0	30.36722	-85.44056
11	Lynn Haven Elem	301 W. 9th Street	Lynn Haven	300	6,000	5	30.24417	-85.61806
			TOTAL	**12,798**				

* "0"means shelter is not in surge area

Table 5-16 List of Potential Hurricane Shelters in Holmes County

No.	NAME	ADDRESS	CITY	CAPACITY	SQ_FEET	CAT.*	Latitude	Longitude
1	Bethleham H.S.	Hwy 177	Bonifay	287	5,740	0	30.925075	85.738113
2	Council on Aging	W. Kansas Ave	Bonifay	25	500	0	30.795660	85.682120
3	Esto Town Hall	Hwy 79 N	Esto	80	1,600	0	30.984823	85.646086
4	Holmes Co. Ag. Center	Hwy 90	Bonifay	200	4,000	0	30.786580	85.662430
5	Holmes H.S.	825 W. Hwy 90	Bonifay	30	600	0	30.786610	85.693980
6	Ponce De Leon H.S.	N. Hwy 81	Ponce De Leon	287	5,740	0	30.740561	85.956783
7	Westville Town Hall	Hwy 179-A	Westville	90	1,800	0	30.774293	85.851453
8	Emergency Medical Service					0	30.787060	85.664380
			TOTAL	999	19,980			

* "0"means shelter is not in surge area

Table 5-17 List of Potential Hurricane Shelters in Washington County

No.	NAME	ADDRESS	CITY	CAPACITY	SQ_FEET	CAT.*	Latitude	Longitude
1	County Agriculture Center	Hwy 90 West	Chipley	151	3,020	0	30.78038	-85.5553
2	Chipley H.S.	200 N. 2nd St.	Chipley	191	3,820	0	30.78272	-85.5488
3	First Baptist Church	200 S. Blvd.	Chipley	579	11,580	0	30.77222	-85.5409
4	Roulhac M.S.		Chipley	122	2,440	0	30.78258	-85.5313
5	Vernon Evangelistic Church		Vernon	72	1,440	0	30.61643	-85.7121
6	Vernon H.S.	1 Yellow Jacket Dr.	Vernon	15	300	0	30.62592	-85.7143
7	Wash. Council on Aging	408 South Blvd. West	Chipley	78	1,560	0	30.77248	-85.5467
			TOTAL	1,208	24,160			

* "0"means shelter is not in surge area

Table 5-18 List of Potential Hurricane Shelters in Jackson County

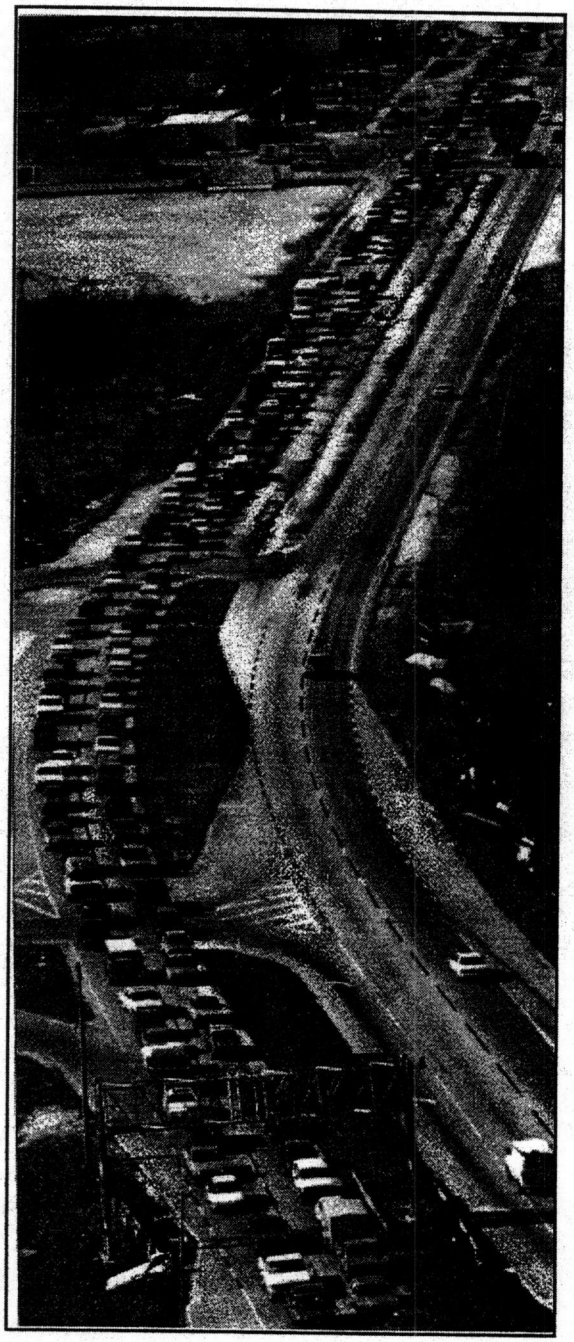
No.	NAME	ADDRESS	CITY	CAPACITY	SQ_FEET	CAT.*	Latitude	Longitude
1	1st United Methodist	2901 Caledonia	Marianna	135	2,700	0		
2	Alford Civic Center	2562 Park Ave	Alford	101	2,020	0		
3	American Legion	3627 HWY 90	Marianna	149	2,980	0		
4	Ascension Luthrean	3975 Hwy 90	Marianna	45	900	0		
5	Christian Center	4791 Sheffield Dr.	Marianna	75	1,500	0		
6	Church of God	Jefferson Street	Marianna	22	440	0		
7	Cottondale Elem	2766 Levy St.	Cottondale	113	2,260	0	30.47.33	85.22.01
8	Cottondale H.S.	2680 Levy St.	Cottondale	113	2,260	0	30.47.33	85.22.28
9	East Side Baptist	4878 Hwy 90	Marianna	60	1,200	0		
10	Golson Elem	4258 2nd Ave	Marianna	1,184	23,680	0	30.47.04	85.14.03
11	G-Ridge Sr. Citizen Ctr.	Illinois Street	Grand Ridge	35	700	0		
12	G-Ridge Teen Center	2094 Poerter Ave	Grand Ridge	21	420	0		
13	Grace Methodist Church	4203 Kelson Ave	Marianna	52	1,040	0		
14	Graceville Civic Center	5224 Brown St	Graceville	212	4,240	0		
15	Graceville Elem	5331 Alabama St.	Graceville	113	2,260	0	30.57.24	85.31.03
16	Graceville H.S.	5539 Brown St.	Graceville	113	2,260	0	30.58.20	85.30.22
17	Grand Ridge H.S.	6925 Florida St.	Grand Ridge	113	2,260	0	30.42.30	85.01.02
18	Jackson Co. Farm Center	3631 HWY 90	Marianna	112	2,240	0		
19	Jackson Sr. Citizens Center	2830 Wynn St	Marianna	48	960	0		
20	Lovedale Baptist	6595 Lovedale Rd.	Greenwood	85	1,700	0		
21	Malone H.S.	5361 9th St.	Malone	113	2,260	0	30.57.16	85.09.52
22	Marianna 1st Baptist	2897 Green St.	Marianna	100	2,000	0		
23	Marianna H.S.	2979 Daniels St.	Marianna	113	2,260	0	30.46.57	85.14.11
24	Marianna M.S.	4144 South St.	Marianna	113	2,260	0	30.45.58	85.15.11
25	New Hope Baptist	3006 New Hope Rd.	Marianna	83	1,660	0		
26	Piney Grove Church	2136 Piney Grove	Cottondale	34	680	0		
27	Providence Baptist	6940 Prov. Chr. Rd.	Grand Ridge	85	1,700	0		
28	Riverside Elem	2958 Cherokee St.	Marianna	113	2,260	0	30.46.44	85.12.56
29	Sneads Elem	1961 Lockey Dr.	Sneads	113	2,260	0	30.42.21	84.56.31
30	Sneads H.S.	8066 Old Spanish	Sneads	113	2,260	0	30.42.32	84.55.18
31	St. Lukes Episcopal	4362 Lafayette	Marianna	281	5,620	0		
			TOTAL	4,162	83,240	0		

* "0"means shelter is not in surge area

TRANSPORTATION ANALYSIS

CHAPTER SIX - TRANSPORTATION ANALYSIS

INTRODUCTION

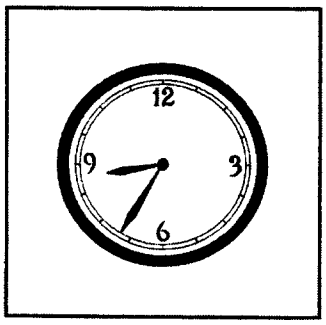


During a hurricane evacuation for northwest Florida a significant number of vehicles have to be moved on the road network in a relatively short period of time. With limited sheltering available for a major hurricane in the coastal counties, most evacuees will go to inland counties and beyond to seek shelter. This often creates traffic bottlenecks.

The magnitude of evacuating vehicles will vary depending upon; the intensity of the hurricane, publicity and warnings given about the storm, and certain behavioral response characteristics of the vulnerable population. During a typical evacuation, vehicles enter the road network at different times depending on the evacuee's response relative to an evacuation order or storm advisory. Conversely, vehicles leave the road network depending on both the planned destinations of evacuees and the availability of acceptable destinations such as public shelters, hotel/motel units and friend's or relative's homes in non-surge prone areas. Vehicles move across the road network from trip origin to destination at a speed dependent on the rate of traffic loadings on various roadway segments and the ability of the segments to handle a certain volume of vehicles each hour. Estimates of evacuation clearance times for the study area must include the effects of evacuation traffic generated by neighboring counties that will use other counties' roadways.

ANALYSIS OBJECTIVES

The overall goals of the transportation analysis performed for the Northwest Florida Hurricane Evacuation Study were to estimate clearance times, (the time it takes to clear a county's roadway of all evacuating vehicles), to define the evacuation road network, and to examine general traffic control issues that could affect traffic flow along critical roadway segments. Clearance time is a value resulting from transportation engineering analysis performed under a specific set of assumptions. It must be coupled with pre-landfall hazards data (sustained tropical storm winds and/or roadway flooding prior to eye landfall) to determine when an evacuation advisory must be issued to allow all evacuees time to reach safe shelter before the arrival of sustained tropical storm winds. Factors that influence clearance time must be studied intensively to determine which factors have the strongest influence. Therefore, a sensitivity analysis was performed and a range of clearance times calculated for each county by varying key input parameters.



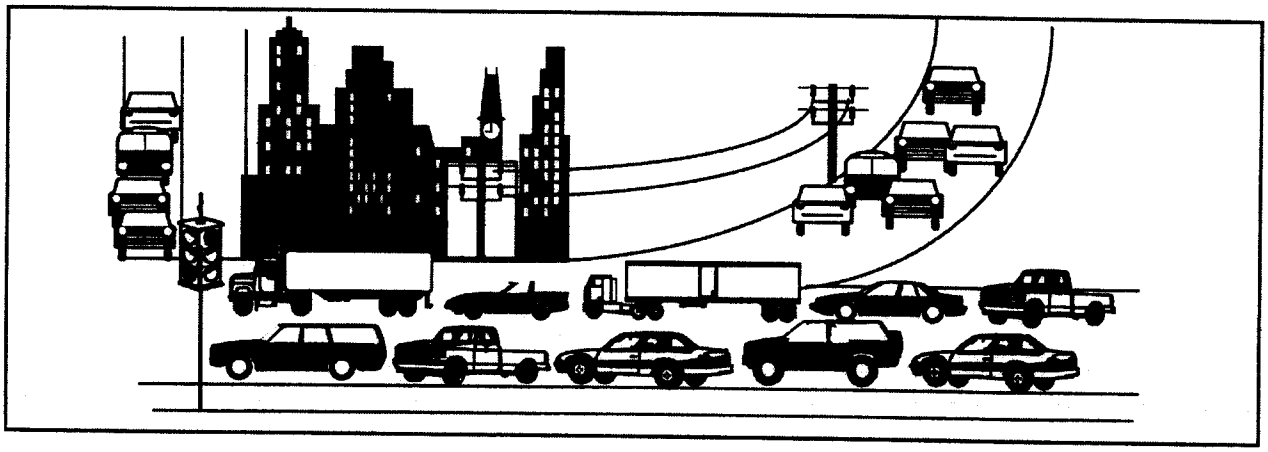
The transportation analysis task initially identified the kinds of traffic movements associated with a hurricane evacuation that must be considered in the development of clearance times. Basic assumptions for the transportation analysis were related to storm scenarios, population-at-risk, behavioral and socioeconomic characteristics, the roadway system and traffic control. A transportation modeling methodology and a roadway system representation were developed for each county in the study area to facilitate model application and development of clearance times. General information and data related to the transportation analysis are presented in summary form in this report. A Transportation Model Support Document is available through the Mobile District, U.S. Army Corps of Engineers and includes detailed transportation modeling statistics and zone by zone data listings for each county.

STATE AND COUNTY ASSISTANCE

A critical element in performing the study tasks was the coordination with each county and the State of Florida. Meetings were held during the spring and summer of 1997 to coordinate the various technical inputs to the analysis and to review graphics and evacuation statistics developed in the study. Counties were provided with draft data throughout the process so that final results would be more credible and usable. Several of the counties invested considerable time in helping to develop a suitable dwelling unit data base.

EVACUATION TRAVEL PATTERNS

The movements associated with hurricane evacuation have been identified for the purposes of this analysis by five general patterns as follows:



A. In-County Origins to In-County Destinations. Trips made from primarily storm surge vulnerable areas and mobile home units in an individual county to destinations within the same county, such as public shelters, hotel and motel units, churches, and friends or relatives outside the storm surge vulnerable areas.

B. In-County Origins to Out-of-County Destinations. Trips made that originate in an individual county but have destinations in other counties of the study area or outside the study area entirely. This is a significant category for the Apalachee Region as many coastal evacuees seek safe destinations in Tallahassee, southwest Georgia, and southeast Alabama.

C. Out-of-County Origins to In-County Destinations. Trips made as in category A that enter an individual county from other counties in the study area.

D. Out-of-County Origins to Out-of-County Destinations. Trips passing through an individual jurisdiction while traveling from one county in the study area to another or outside the study area entirely.

E. Background Traffic. Trips made by persons preparing for the arrival of hurricane conditions; these trips are primarily shopping trips to gather supplies. In the Tallahassee area, trips from work to home to assist the family in evacuation could impact evacuation of coastal evacuees. Background traffic can also include transit vehicles (vans/buses) used to pick up evacuees without personal transportation.

Figure 6-1 graphically depicts these traffic movement patterns associated with hurricane evacuation situations in the Region. It is important to recognize that three of the five defined patterns involve traffic movement patterns outside the county's boundaries. It is evident that, depending on the assumed storm track, these inter-county movements can and do result in a number of regional traffic impacts. During the transportation analysis task, these movements were quantified to facilitate estimation of demand on a roadway segment and resulting clearance times.

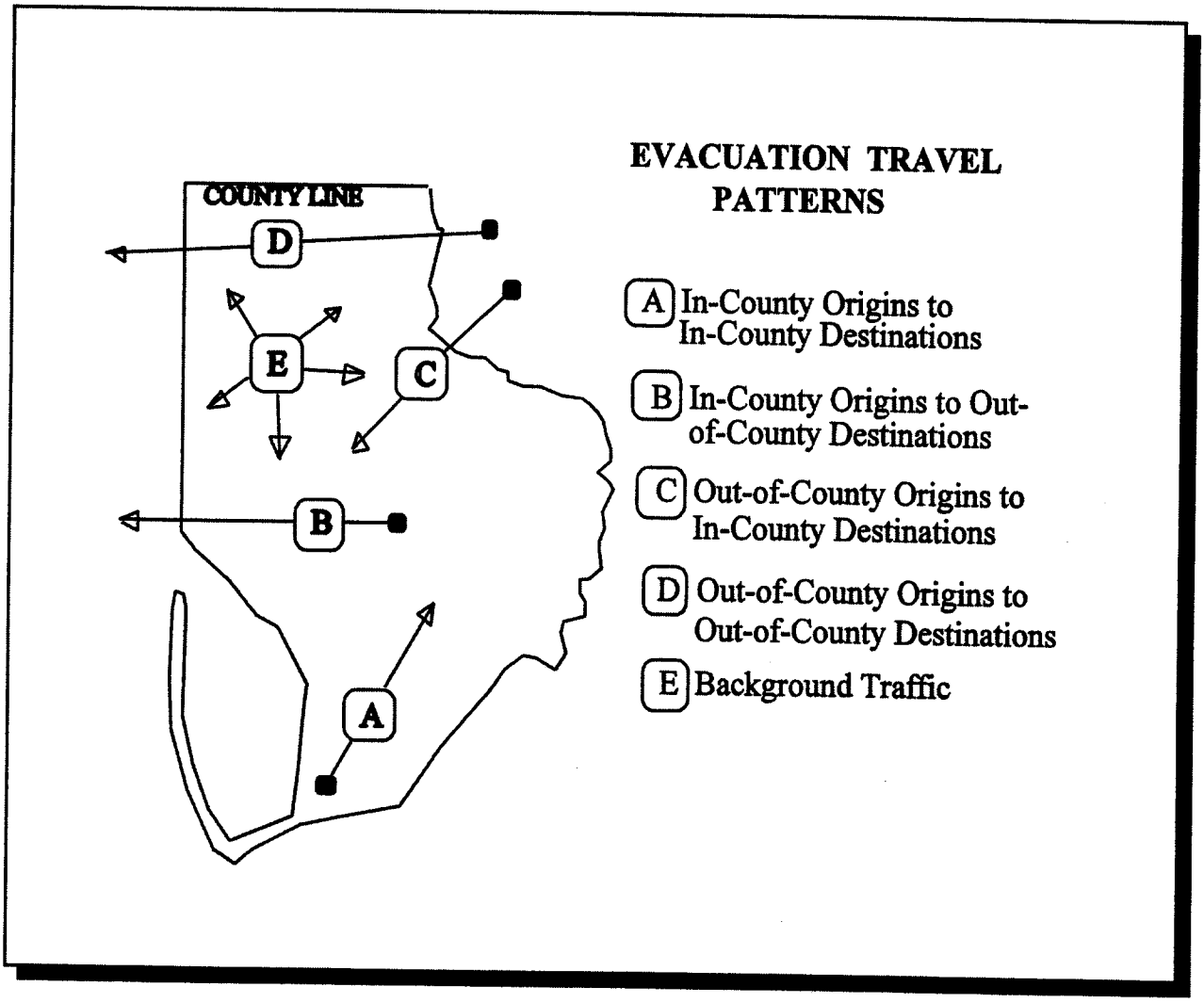


Figure 6-1 Evacuation Travel Patterns

TRANSPORTATION ANALYSIS INPUT ASSUMPTIONS

Since all hurricanes differ from one another, it becomes necessary to set forth clear assumptions about storm characteristics and evacuees' expected response before transportation modeling can begin. Not only does a storm vary in its track, intensity and size, but also in the way it is perceived by residents in potentially vulnerable areas. These factors cause a wide variance in the behavior of the vulnerable population. Even the time of day that a storm makes landfall influences the time parameters of an evacuation.

The transportation analysis computes clearance times based on a set of assumed conditions and behavioral responses. It is likely that an actual storm will differ from a simulated storm for which clearance times are calculated in this report. Therefore, a sensitivity analysis was performed during the transportation modeling. Those variables having the greatest influence on clearance time were identified and then varied to establish the logical range within which the actual input assumption values might fall.

Key information guiding the transportation analysis are grouped into five areas.

1. Storm Surge Areas and Evacuation Zones
2. Traffic Analysis Zones
3. Housing and Population Data
4. Behavioral Characteristics of the Evacuating Population
5. Roadway Network and Traffic Control Assumptions

These five areas and their assumed parameters are described in the following paragraphs.

a. Surge Areas and Evacuation Zones

The first building block of the transportation model was the development of evacuation zones. As discussed in Chapter 3, the new surge inundation maps were used to determine the evacuation zone boundaries. All five coastal counties selected three evacuation scenarios and developed evacuation zones as shown on Plates 3-1 through 3-5. A category 1, category 2-3 and category 4-5 evacuation zone was delineated and adopted by each county. The evacuation zone boundaries follow roadways so that they can be verbally described during an evacuation order. Each evacuation zones is made up of smaller subareas called traffic analysis zones which are used by the transportation model to determine how many vehicles will use each roadway. The traffic model calculations are based on population and dwelling unit data which translates into number of vehicles that will be used during an evacuation. Therefore, population and dwelling unit data was developed for each traffic analysis zone.

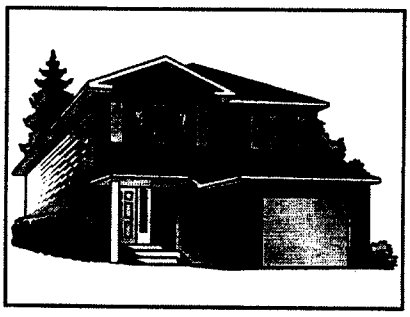
b. Traffic Analysis Zones

The traffic analysis zones used for each county vary in shape and size but conform well with the evacuation zones. Some of the criteria used to define the traffic zones are as follows:

- Zones should relate to expected surge flooding limits for each storm scenario.
- Zones should relate well to census data and other available population data.
- Zones should be set up, if possible, for ease of use in issuing an evacuation order or advisory.
- Zonal boundaries should include identifiable natural features, roadways, landmarks, etc.
- Zones should be able to be served by major evacuation routes.
- Zones must allow for appropriate transportation modeling.

Plates 6-1 through 6-5 located at the end of this chapter show the Traffic Analysis Zones established in each coastal county for the transportation analysis.

c. Housing and Population Data



Housing units and socioeconomic parameters for each traffic analysis zone were estimated for the year 2000 as the base year for the study. Data from the 1990 Census was supplemented by current year mobile home and permanent occupied dwelling unit data provided by each county. Table 2-1 through 2-5 summarizes this data for each coastal county. Escambia County had Gulf Power tabulate all of its active meter account information to provide an up to date check on number of units in some of the vulnerable southern areas of the county. The Florida Statistical Abstract was then used to assertain a projected Year 2005 population. An average of the high and medium projection was used to establish a figure by which a percentage growth could be calculated between the Year 2000 and 2005.

Past experience shows that mobile homes can be severely damaged and totally destroyed by hurricane force winds . Fast moving hurricanes can effect inland counties a hundred miles or more from the coast. Future inland wind warnings and mobile home evacuations in non-surge areas adds dramatically to the number of hurricane-vulnerable people in the area. Tables 6-1 through 6-5 show the number of permanent dwelling units, mobile homes, and seasonal units by coastal county by traffic analysis zone and evacuation zone. The transportation analysis focuses on dwelling units within the potential storm surge flooded areas of a county and inland mobile homes which would be vulnerable to hurricane force winds. Subtotals of dwelling units and population are shown in Table 3-2 in Chapter 3.

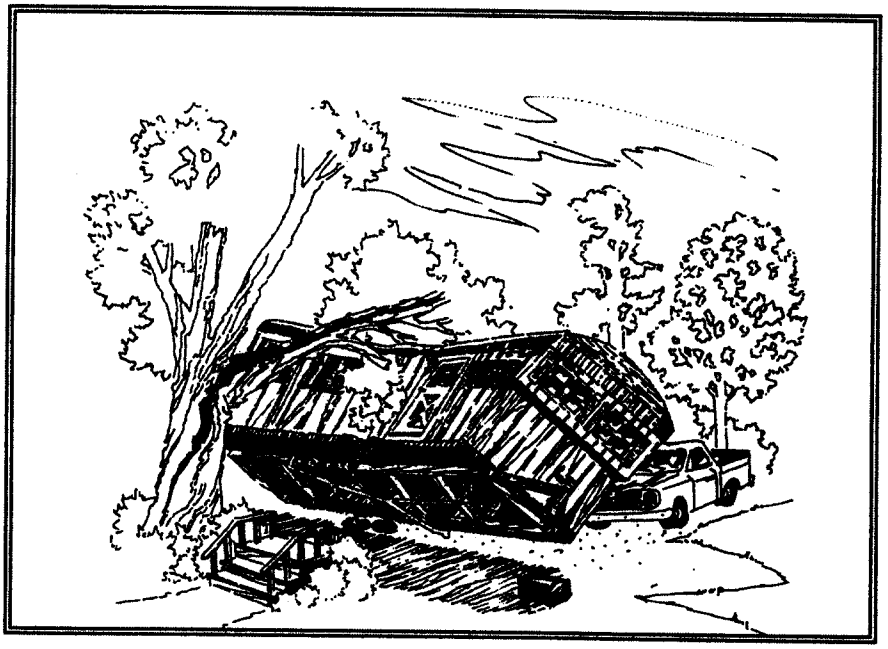


Table 6-1 Escambia County Traffic Analysis Zone Data
For the Base Year 2000

Evac Zone	Permanent Occupied Units	Permanent Population	Mobile Home Units	Mobile Home Population	Seasonal Tourist Units	Seasonal Population
1	1,960	5,037	0	0	1,305	3588
2	1,612	4,142	56	143	1,075	2956
3	2,745	7,054	121	310	0	0
4	1,166	2,996	11	28	0	0
Subtotal 1-4	7483	19229	188	481	2380	6544
Traffic Zones 1-4 make up the Category 1 Hurricane Evacuation Zone						
5	50	128	0	0	0	0
6	3,171	8,149	124	318	455	1251
7	2,478	6,368	293	753	0	0
Subtotal 1-7	13,182	33,874	605	1,552	2,835	7795
Traffic Zones 1-7 make up the Category 2-3 Hurricane Evacuation Zone						
8	2,617	6,725	215	552	0	0
9	6,598	16,956	620	1,593	84	231
10	2,450	6,296	494	1,269	10	27
11	2,013	5,173	155	398	0	0
Subtotal 1-11	26,860	69,024	2,089	5,364	2,929	8053
Traffic Zones 1-11 make up the Category 4-5 Hurricane Evacuation Zone						
12	1,047	2,690	284	729	0	0
13	8,936	22,965	824	2,117	190	522
14	11,991	30,816	1,889	4,854	696	1914
15	14,677	37,719	86	221	219	602
16	7,439	19,118	255	655	661	1817
17	8,708	22,379	1,300	3,341	1,322	3635
18	6,614	16,997	1,363	3,502	0	0
19	7,547	19,395	1,356	3,484	0	0
20	19,276	49,539	2,385	6,129	582	1600
21	5,382	13,831	1,257	3,230	0	0
Total	**118,477**	**304,473**	**13,088**	**33,626**	**6,599**	**18,143**

Note: All evacuation zones include the recommended evacuation of mobile homes through-out the County. Also the permanent occupied units and the permanent population include the mobile home units and population.

Table 6-2 Santa Rosa County Traffic Analysis Zone Data
For the Base Year 2000

Traffic Zone	Permanent Occupied Units	Permanent Population	Mobile Home Units	Mobile Home Population	Seasonal Tourist Units	Potential Tourist Population
1	254	681	0	0	972	2,673
2	2,827	7,576	390	1,045	76	209
3	1,277	3,422	291	780	7	19
4	116	311	53	142	0	0
5	185	496	65	174	0	0
6	726	1,946	189	507	2	6
Subtotal 1-6	5,385	14,432	988	2,648	1,057	2,907
Traffic Zones 1-6 make up the Category 1 Hurricane Evacuation Zone						
7	895	2,399	195	523	0	0
8	618	1,656	138	370	0	0
9	89	239	30	80	0	0
10	324	868	151	405	0	0
11	382	1,024	134	359	0	0
12	812	2,176	205	549	2	6
13	395	1,059	84	225	0	0
Subtotal 1-13	8,900	23,852	1,925	5,159	1,059	2,912
Traffic Zones 1-13 make up the Category 2-3 Hurricane Evacuation Zone						
14	3,119	8,359	386	1,034	160	440
15	1,345	3,605	298	799	14	39
16	96	257	33	88	0	0
17	703	1,884	160	429	0	0
Subtotal 1-17	14,163	37,957	2,802	7,509	1,233	3,391
Traffic Zones 1-17 make up the Category 4-5 Hurricane Evacuation Zone						
18	4,490	12,033	1,193	3,197	43	118
19	282	756	96	257	0	0
20	2,359	6,322	1,059	2,838	0	0
21	8,608	23,069	2,119	5,679	17	47
22	7,472	20,025	798	2,139	129	355
23	2,826	7,574	619	1,659	0	0
24	2,282	6,116	612	1,640	0	0
Totals	**42,482**	**113,852**	**9,298**	**24,919**	**1,422**	**3,911**

Note: All evacuation zones include the recommended evacuation of mobile homes through-out the County. Also the permanent occupied units and the permanent population include the mobile home units and population.

Table 6-3 Okaloosa County Traffic Analysis Zone Data
For the Base Year 2000

Evac Zone	Permanent Occupied Units	Permanent Population	Mobile Home Units	Mobile Home Population	Seasonal Tourist Units	Potential Tourist Population
1	1,817	4,724	0	0	4,247	11,679
2	1,201	3,123	12	31	3,167	8,709
3	852	2,215	96	250	0	0
4	666	1,732	40	104	0	0
Subtotal 1-4	4,536	11,794	148	385	7,414	20,389
Traffic Zones 1-4 make up the Category 1 Hurricane Evacuation Zone						
5	3,751	9,753	267	694	1,609	4,425
6	1,668	4,337	451	1,173	0	0
7	1,541	4,007	17	44	523	1,438
8	1,705	4,433	134	348	13	36
9	173	450	1	3	0	0
Subtotal 1-9	13,374	34,772	1,018	2,647	9,559	26,287
Traffic Zones 1-9 make up the Category 2-3 Hurricane Evacuation Zone						
10	2,588	6,729	677	1,760	0	0
11	2,708	7,041	17	44	125	344
12	3,964	10,306	597	1,552	31	85
13	2,108	5,481	149	387	0	0
14	615	1,599	19	49	14	39
15	2,453	6,378	287	746	0	0
16	1,068	2,777	69	179	0	0
Subtotal 1-16	28,878	75,083	2,833	7,366	9,729	26,755
Traffic Zones 1-16 make up the Category 4-5 Hurricane Evacuation Zone						
17	3,378	8,783	182	473	0	0
18	4,005	10,413	287	746	158	435
19	0	0	0	0	0	0
20	2,031	5,281	75	195	0	0
21	10,538	27,399	2,200	5,720	202	556
22	4,556	11,846	146	380	0	0
23	0	0	0	0	0	0
24	0	0	0	0	0	0
25	7,933	20,626	757	1,968	465	1,279
26	2,627	6,830	655	1,703	0	0
27	4,010	10,426	818	2,127	0	0
Totals	**67,956**	**176,686**	**7,953**	**20,678**	**10,554**	**29,024**

Note: All evacuation zones include the recommended evacuation of mobile homes through-out the County. Also the permanent occupied units and the permanent population include the mobile home units and population.

Table 6-4 Walton County Traffic Analysis Zone Data
For the Base Year 2000

Evac Zone	Permanent Occupied Units	Permanent Population	Mobile Home Units	Mobile Home Population	Seasonal Tourist Units	Potential Tourist Population
1	1,138	2,777	14	34	3,015	8,291
2	692	1,688	151	368	740	2,035
3	46	112	9	22	0	0
4	215	525	260	634	0	0
Subtotal 1-4	2,091	5,102	434	1,059	3,755	10,326
Traffic Zones 1-4 make up the Category 1 Hurricane Evacuation Zone						
5	2,063	5,034	927	2,262	4,860	13,365
6	736	1,796	315	769	373	1,026
7	115	281	23	56	0	0
Subtotal 1-7	5,005	12,212	1,699	4,146	8,988	24,717
Traffic Zones 1-7 make up the Category 2-3 Hurricane Evacuation Zone						
8	169	412	92	224	0	0
9	670	1,635	615	1,501	0	0
Subtotal 1-9	5,844	14,259	2,406	5,871	8,988	24,717
Traffic Zones 1-9 make up the Category 4-5 Hurricane Evacuation Zone						
10	429	1,047	429	1,047	0	0
11	1,841	4,492	242	590	0	0
12	456	1,113	322	786	0	0
13	1,175	2,867	358	874	0	0
14	4,743	11,573	1,271	3,101	0	0
Total	**14,488**	**35,351**	**5,028**	**12,268**	**8,988**	**24,717**

Note: All evacuation zones include the recommended evacuation of mobile homes through-out the County. Also the permanent occupied units and the permanent population include the mobile home units and population.

Table 6-5 Bay County Traffic Analysis Zone Data
For the Base Year 2000

Evac Zone	Permanent Occupied Units	Permanent Population	Mobile Home Units	Mobile Home Population	Seasonal Tourist Units	Potential Tourist Population
1	1,438	3,653	0	0	7,852	21,593
2	346	879	0	0	1,980	5,445
3	627	1,593	0	0	168	462
4	627	1,593	68	173	168	462
5	517	1,313	115	292	27	74
6	336	853	105	267	31	85
7	682	1,732	271	688	0	0
8	1,581	4,016	133	338	0	0
Subtotal 1-8	6,154	15,631	692	1,758	10,226	28,122
Traffic Zones 1-8 make up the Category 1 Hurricane Evacuation Zone						
9	2,821	7,165	1,104	2,804	4,225	11,619
10	245	622	99	251	0	0
11	650	1,651	169	429	93	256
12	161	409	86	218	0	0
13	778	1,976	66	168	0	0
14	5,631	14,303	249	632	1,088	2,992
15	3,250	8,255	629	1,598	112	308
16	940	2,388	101	257	252	693
Subtotal 1-16	20,630	52,400	3,195	8,115	15,996	43,989
Traffic Zones 1-16 make up the Category 2-3 Hurricane Evacuation Zone						
17	940	2,388	169	429	252	693
18	3,150	8,001	1,677	4,260	1,731	4,760
19	1,622	4,120	798	2,027	2,506	6,892
20	723	1,836	387	983	0	0
21	5,524	14,031	294	747	0	0
22	580	1,473	301	765	0	0
Subtotal 1-22	33,169	84,249	6,821	17,325	20,485	56,334
Traffic Zones 1-22 make up the Category 4-5 Hurricane Evacuation Zone						
23	13,429	34,110	2,031	5,159	527	1,449
24	8,728	22,169	1,906	4,841	221	608
25	1,223	3,106	325	826	0	0
26	3,254	8,265	1,742	4,425	0	0
27	777	1,974	401	1,019	0	0
28	424	1,077	204	518	0	0
Totals	**61,004**	**154,950**	**13,430**	**34,112**	**21,233**	**58,391**

Note: All evacuation zones include the recommended evacuation of mobile homes through-out the County. Also the permanent occupied units and the permanent population include the mobile home units and population.

d. Behavioral Assumptions

The evacuation of an endangered population due to a hurricane approaching the Northwest Florida Coast involves the coordinated action of thousands of individuals. Information from the behavioral analysis described in Chapter 4 was used to derive the best assumptions possible for the transportation analysis. Specifically, for transportation purposes, the following behavioral aspects were addressed:

- Participation rates - what percent of the population in different areas will evacuate their dwelling units for future hurricane threats?
- Evacuation rates (rapidity of response) - how quickly will evacuees respond to what local officials are telling them to do?
- Destination percentages - what percent of the population by county sub-area will evacuate to local public shelters, local hotel/motels, local friends' and relatives' homes, or out of the county entirely?
- Vehicle usage - of the vehicles available to the households, what percent of those vehicles will be used in an evacuation?

The following sources of input were used to develop the selected behavioral variables. However it should be noted that even with these resources, a great deal of judgment was involved in developing the needed parameters on a zone by zone basis.

- Discussions concerning expected behavioral response with emergency management staff in each county
- Review of past behavioral studies as a part of various hurricane planning efforts conducted by the U.S. Army Corps of Engineers, Mobile District.
- Behavioral research and recommendations by Hazards Management Group for the region; particularly behavioral data collected for the 1995 Opal response in northwest Florida and recent residential behavioral surveys accomplished in the study area.

(1) Participation Rates

A key factor in the traffic estimates is estimating how many people will actually evacuate for a particular storm scenario. The behavioral analysis in Chapter 4 discusses many of the variables that a person considers to make a decision on whether to evacuate or not. Key factors behind the participation assumptions are as follows:

- Zones that will be ordered to evacuate for storm surge were assumed to have a 100% participation rate.
- All mobile homes (100%) in inland zones are assumed to evacuate.
- A portion of the non-surge population was also assumed to evacuate. This percentage will be higher for more intense hurricanes (1% - 15%).

The 100% participation rate assumptions were used as a matter of public safety to allow those who are vulnerable to storm surge the opportunity to evacuate whether they choose to or not. Actual participation rates are usually less than 100% therefore, two additional scenarios were run for each county with lower participation rates for a Category 1 storm with low tourist occupancy and a Category 4-5 storm with high tourist occupancy. The participation rates used for the two additional scenarios are shown in Table 6-6.

Table 6-6 Evacuation Participation Rates

	Category 1 Storm with low tourist occupancy		Category 4-5 Storm with high tourist occupancy	
	High Rate	Lower Rate	High Rate	Lower Rate
Category 1 Evacuation Area				
Mobile Home Participation Rate	100%	90%	100%	95%
Permanent Unit Participation Rate	100%	70%	100%	90%
Tourist Unit Participation Rate	100%	90%	100%	100%
Category 2-5 Evacuation Areas				
Mobile Home Participation Rate	100%	70%	100%	80%
Permanent Unit Participation Rate	10%	10%	100%	80%
Tourist Unit Participation Rate	10%	5%	100%	100%
Non-Surge Areas				
Mobile Home Participation Rate	100%	50%	100%	70%
Permanent Unit Participation Rate	1%	1%	20%	25%
Tourist Unit Participation Rate	5%	5%	50%	50%

(2) Response Rates

Another critical behavioral aspect that was considered for the transportation analysis is the response rate of the evacuating population. Behavioral data from research of past hurricane evacuation shows that mobilization and actual departures of the evacuating population occur over a period of many hours and sometimes a very brief time. In the Hurricane Opal evacuations, evacuees loaded the road network in a very short period of time since most evacuees waited until the morning of the storm to begin their evacuation movement. For this study, clearance times were tested for three evacuation response rates (long, medium and rapid) represented by different behavioral response curves as shown in Figure 6-2. Behavioral response curves describing mobilization by the vulnerable population define the rate at which evacuating vehicles load onto the evacuation street network for each hourly interval relative to an evacuation order or strong advisory. The percentage of evacuees leaving dwelling units is then available for the calculations relating to traffic loadings at critical links along the evacuation network. The behavioral response curves shown below range from rapid response to long response and are intended to include a potential range of possible mobilization times that might be experienced in a future hurricane evacuation situation. For sensitivity analysis, the mobilization/traffic loading time was varied between four hours and ten hours.

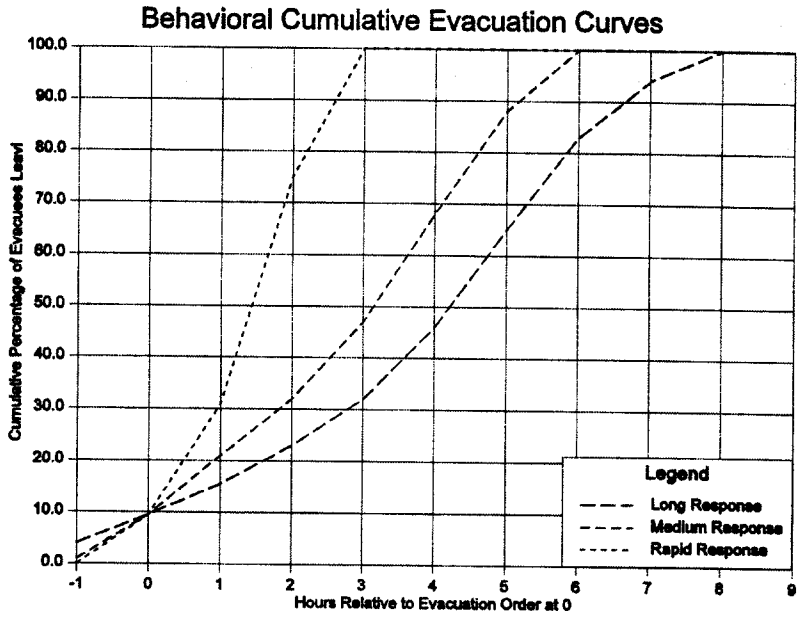


Figure 6-2 Evacuation Response Curves.

(3) Destination types

The percentage of evacuees assumed to go to one of four general destination types was another important behavioral input to the transportation analysis. Evacuee destination percentages were discussed with emergency management staff in each area after careful review of information available in the behavioral analysis. Figures were developed for the expected percent of evacuees going to local public shelters, hotel/motel units, the home of a friend or relative, or out of the county entirely. Destination percentages were varied for each evacuation zone in each county depending on category of risk (distance from coastline) or special characteristics of a zone such as high number of mobile home units.

It should be noted that destination percentages refer to destination desires. Specific assumptions for each scenario and evacuation zone are provided in the Transportation Model Support Document. It should be noted that these destination percentages refer to destination desires. Where destination desires could not be satisfied with in-county capacities, the transportation analysis assumed that these evacuees would have to leave the county to find acceptable shelter. One important behavioral aspect built into the rates is that there will be a larger percentage of evacuees going out of county as the storm intensity increases. Also, in the lower intensity scenarios in the non-surge area, most of the evacuees are mobile home residents who have a higher propensity to use public shelters. Table 6-7 shows evacuee destinations used in the study and in Opal.

Table 6-7 Assumed out of County Evacuee Destinations

	Percent From:					
	Escambia/Santa Rosa		Okaloosa/Walton		Bay	
Going To:	Opal	Study Modeling	Opal	Study Modeling	Opal	Study Modeling
Florida Locations Outside Region	39%	35%	34%	35%	47%	40%
Alabama Locations	37%	45%	44%	45%	34%	40%
Georgia Locations	6%	5%	5%	5%	18%	15%
Mississippi Locations	10%	15%	9%	15%	0%	5%
Tenn., N.C., S.C., Other Locations	8%	0%	8%	0%	1%	0%

(4) Vehicle Usage

Vehicle usage percentages refer to the percentage of vehicles available at the home origin that are assumed to be used in the evacuation. Vehicle usage percentages were approximately 65% to 75% (depending on distance from the coastline) for the Northwest Florida Region. The percent of households expected to pull a boat, trailer or RV was approximately 10 percent in the immediately coastal area zones. The 1986 Tri-State Study estimated that 61% of available vehicles would be used for the evacuation and 11% of those would pull trailers.

e. Roadway Network and Traffic Control Assumptions

A final group of assumptions used for input to the transportation analysis is related to the roadway system chosen for the evacuation network and traffic control measures considered for traffic movement. Although the assumptions developed for the transportation analysis are general, the efforts at county and municipal levels regarding traffic control and roadway selection must be quite detailed. In heavily urbanized areas like Pensacola, Ft. Walton Beach, and Panama City, most intersections will be controlled by existing traffic signals. However, as resources permit, traffic control officers will be stationed at bottlenecks identified in this study as well as other local locations of concern. Detailed law enforcement assignments to major bottlenecks involves extensive coordination among local and state officials. This study does not presume to replace those efforts, but seeks to quantify the time elements within which such personnel would operate.

In choosing roadways to be used for the evacuation network, an effort was made to include street facilities with sufficient elevations, little or no adjacent tree coverage, substantial shoulder width and surface, and roadways already contained in existing hurricane evacuation plans. In an area such as northwest Florida, where there are urban and rural low lying streets that flood in heavy rainfall events, these criteria can be difficult to meet.

In order to determine the routing of evacuation, a representation of the roadway system was developed. A "link-node" system was developed to identify roadway sections. Nodes are used to identify the intersection of two roadways or changes in roadway characteristics. Links are the roadway segments as defined by the nodes when connected. Each link is identified by a letter designation. Plates 6-6 through 6-10 illustrate the coded evacuation network with link names and zone connections to the links shown by open circles and dashed lines. Plates 6-11 to 6-13 show the most used evacuation routes for Holmes, Washington and Jackson Counties.

Once the links and nodes were established for the evacuation routes, directional traffic service volumes at Level of Service D were established for each link for the Year 2000. This was accomplished by ascertaining number of lanes, facility type, and area type information from highway plots available through the MPO and "field checks"/updating accomplished by PBS&J. Tables were then used to specify a directional, level of service D service volume based on link characteristics.

Important assumptions concerning the evacuation road network for the analysis which must be mentioned are:

- The evacuation of all vehicles will occur prior to the arrival of <u>sustained</u> tropical storm winds (39 mph) and storm inundation of evacuation routes

- Provisions will be made for the removal of vehicles in distress on the network through aggressive incident management and agreements worked out with tow truck operators

- Special personnel (highway patrolman, local policemen, sheriffs, deputies), will be assigned to critical intersections and signal timings will be "actuated" to provide the most green time for northbound movements away from the coast.

- The U.S. Coast Guard will be contacted to "lock down" draw bridges once evacuation orders or advisories are issued

In summary, data inputs to the transportation analysis can be classified into one of four categories as shown in Table 6-8.

Table 6-8 Transportation Analysis Data Inputs

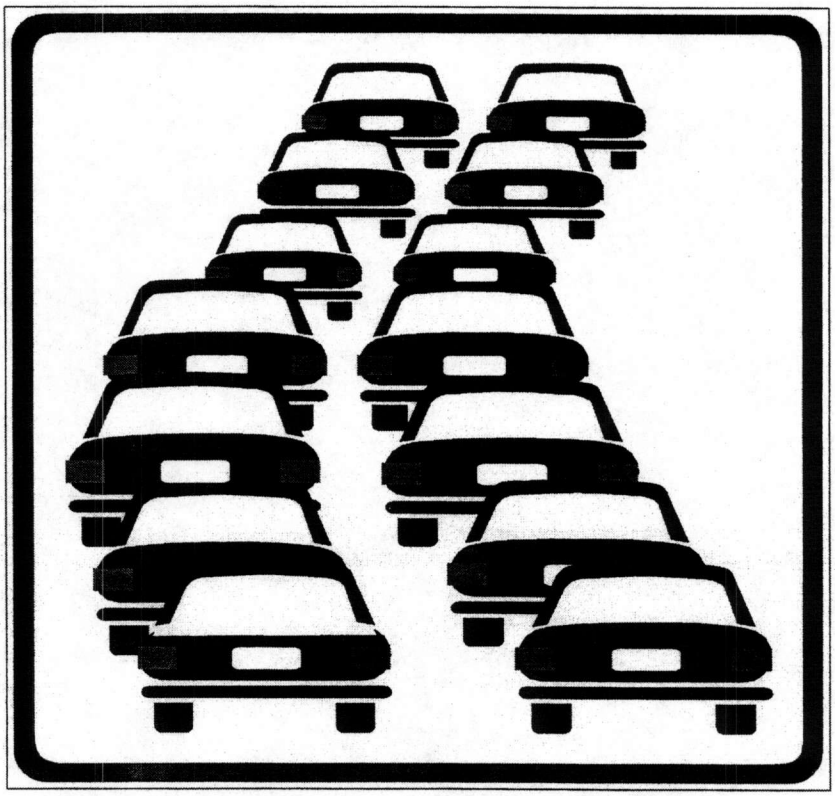
Hazards Data	Socioeconomic Data
* Land Areas Flooded for each Category Hurricane	* Housing Unit Data
* Public Shelter Usability by Hurricane Category	* People Per Housing Unit
* Time of Arrival of Tropical Storm Winds / Roadway Inundation	* Vehicles Per Housing Unit
	* Occupancy Assumptions
	* Presence of Tourists/Visitors

Behavioral Data	Roadway Network
* Rapidity of Response	* Number of Lanes by Link
* Participation Rates	* Facility types by Link
* Destination Percentages	* Traffic Count Data
* Vehicle Usage	* Elevation - "Low Spots"
* Percent Pulling Trailer/Boat	* Critical Links / Intersections Capacity Data

e. Toll Bridge/Road Operations During Evacuations

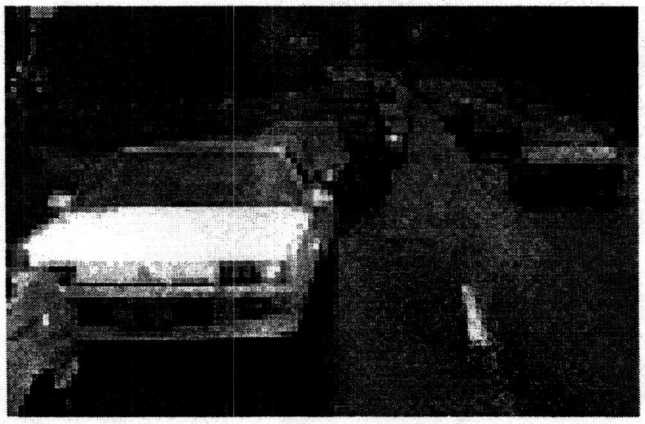
Toll booth operations during an evacuation are critical to the timing of the evacuation. A clear understanding must be made between the Toll booth operators and the State and County prior to the evacuation to prevent traffic backups and delays. The 4 toll booth facilities at Pensacola Beach, Navarre Beach, Mid Bay Bridge and a recently opened booth at Garson Point. The toll booth operations are suspended when an evacuation order is made.

TRANSPORTATION MODELING METHODOLOGY



The transportation modeling methodology developed for this study involved a number of manual and computer techniques. The methodology, while very technical, was designed to be consistent with the accuracy level of the modeling inputs and assumptions. The methodology is unique in that it is sensitive to the key behavioral aspects of evacuees.

The Transportation Model Support document specifies and explains the steps carried out in the transportation modeling at a detailed technical level.



A summary of the six major steps of the transportation analysis are briefly described below:

SIX MAJOR STEPS OF THE TRANSPORTATION ANALYSIS

1. Evacuation Zonal Data Development - Data gathered by census tract and block group were stratified by Traffic/evacuation zone. Numbers of permanent residential dwelling units, mobile homes, and seasonal units were compiled by zone for the base year 2000.

2. Evacuation Road Network Preparation - This step identifies which roadways will be used for evacuation and includes the assignment of reasonable vehicle carrying capacities during an evacuation. This includes number of lanes and roadway type.

3. Trip Generation - Calculates the total evacuating people and vehicles originating from each evacuation zone.

4. Trip Distribution - Determines where evacuees will go. (Shelter, hotel/motel, friends/relatives, out-of-county, etc.)

5. Trip Assignment - Determines what route(s) evacuees will take to get from their origin to their destination.

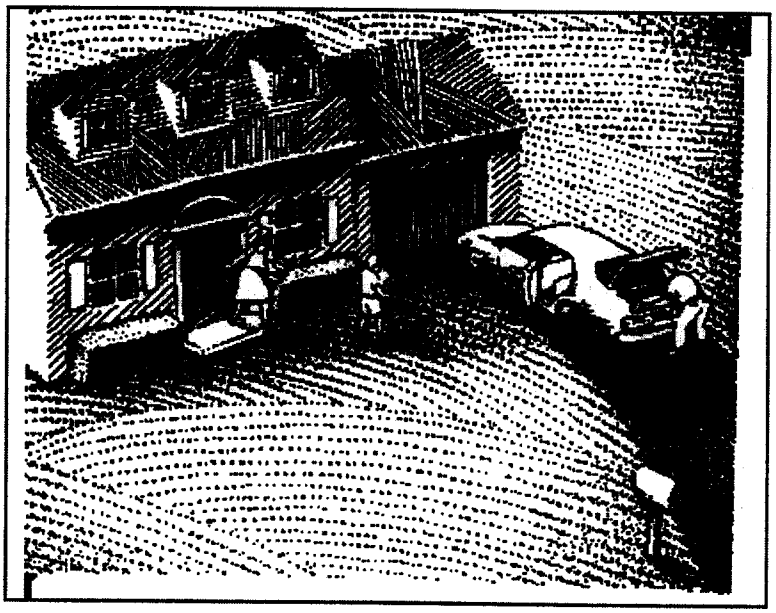
6. Calculation of Clearance Times - Determines how much time it will take for all evacuees to clear the evacuation network. The end product of this major step is a set of clearance times for each storm scenario.

TRANSPORTATION MODEL RESULTS

The transportation modeling was set up for the Year 2000 base year. A wealth of data was produced in the transportation analysis and is published in the Transportation Model Support Document. The items listed below are the most critical outputs for planning for shelter needs, anticipating bottlenecks, and defining the timing requirements of an evacuation.

- Evacuating people and vehicles.
- Destinations and shelter demand.
- Traffic volumes and critical roadway segments.
- Estimated clearance times.

a. Evacuating People and Destinations



The evacuating vehicles and people produced by each evacuation scenario were split up by destination type. The four general destination types are in-county public shelter, in-county hotel/motels, in-county home of a friend or relative, and out-of-county. This was accomplished for the Year 2000 base year, for each storm intensity and for two levels of assumed tourist occupancy. Table 6-8 shows the numbers of people estimated to leave dwelling units for each county and scenario. Numbers of people involved in an actual evacuation will most likely be less than these figures because 100 percent participation of units in storm surge vulnerable evacuated areas and all mobile homes was assumed for most scenarios. Even with door-to-door evacuation notification, it will be difficult to convince all to leave who should leave. Each County also had two scenarios labeled (realistic) which assumed participation rates less than 100%

Table 6-9 Escambia and Santa Rosa Evacuating People & Vehicles
by Destination and Evacuation Scenario

	Total Evacuating People	Evacuees Going to Shelters	Evacuees Going to Friends	Evacuees Going to Hotel/Motel	Evacuees Going out of County	Total Evacuating Vehicles	Vehicles Going out of County
ESCAMBIA COUNTY							
Category 1 low tourist occupancy	60,257	6,254	33,681	1,194	19,130	24,448	7,933
Category 1 low tourist (realistic)*	40,265	3,900	21,432	849	14,082	16,377	5,822
Category 1 high tourist occupancy	63,851	6,436	33,681	1,194	22,545	25,817	9,235
Category 2/3 low tourist occupancy	91,595	10,044	43,565	1,439	36,557	36,573	14,788
Category 2/3 high tourist occupancy	96,023	10,263	43,565	1,439	40,763	38,264	16,394
Category 4/5 low tourist occupancy	136,985	15,426	51,825	285	69,451	54,126	27,566
Category 4/5 high tourist occupancy	147,030	16,279	53,397	285	77,072	57,979	30,481
Category 4/5 high tourist (realistic)*	140,549	16,011	51,721	257	72,560	55,359	28,663
SANTA ROSA COUNTY							
Category 1 low tourist occupancy	39,402	4,047	25,180	722	9,458	15,751	3,879
Category 1 low tourist (realistic)*	26,258	2,495	16,227	532	7,006	10,559	2,874
Category 1 high tourist occupancy	40,880	4,122	25,180	722	10,863	16,318	4,417
Category 2/3 low tourist occupancy	48,352	5,030	26,442	722	16,160	19,135	6,496
Category 2/3 high tourist occupancy	49,857	5,106	26,442	722	17,587	19,710	7,044
Category 4/5 low tourist occupancy	65,598	7,064	31,171	722	27,079	25,663	10,675
Category 4/5 high tourist occupancy	67,424	7,154	31,171	722	28,814	26,360	11,334
Category 4/5 high tourist (realistic)*	59,110	6,275	27,230	657	25,349	23,135	9,984

* Note: The realistic scenarios used participation rates less than 100 %.

Table 6-10 Okaloosa and Walton Evacuating People & Vehicles
by Destination and Evacuation Scenario

	Total Evacuating People	Evacuees Going to Shelters	Evacuees Going to Friends	Evacuees Going to Hotel/Motel	Evacuees Going out of County	Total Evacuating Vehicles	Vehicles Going out of County
OKALOOSA COUNTY							
Category 1 low tourist occupancy	42,031	4,161	19,867	815	17,191	17,892	7,270
Category 1 low tourist (realistic)*	32,026	2,934	14,306	600	14,188	13,562	5,944
Category 1 high tourist occupancy	57,928	4,955	19,867	815	32,294	23,006	12,128
Category 2/3 low tourist occupancy	68,100	6,858	27,253	1,208	32,785	28,596	13,729
Category 2/3 high tourist occupancy	88,382	7,873	27,253	1,208	52,053	35,115	19,922
Category 4/5 low tourist occupancy	110,004	11,696	37,267	195	60,849	45,868	25,331
Category 4/5 high tourist occupancy	131,300	12,760	37,267	195	81,080	52,714	31,836
Category 4/5 high tourist (realistic) *	117,906	11,509	32,673	177	73,553	47,118	28,681
WALTON COUNTY							
Category 1 low tourist occupancy	19,986	1,850	9,438	375	8,322	8,708	3,569
Category 1 low tourist (realistic)*	13,932	1,181	5,985	280	6,485	6,054	2,755
Category 1 high tourist occupancy	27,167	2,208	9,438	375	15,146	11,448	6,173
Category 2/3 low tourist occupancy	28,507	2,526	9,766	453	15,761	12,157	6,601
Category 2/3 high tourist occupancy	44,572	3,328	9,766	453	31,022	18,291	12,428
Category 4/5 low tourist occupancy	30,246	2,773	8,686	79	18,709	12,897	7,870
Category 4/5 high tourist occupancy	46,311	3,575	8,686	79	33,971	19,031	13,699
Category 4/5 high tourist (realistic)*	42,826	3,197	7,362	71	32,198	17,515	12,924

* Note: The realistic scenarios used participation rates less than 100 %.

Table 6-11 Bay and Holmes Evacuating People & Vehicles
by Destination and Evacuation Scenario

	Total Evacuating People	Evacuees Going to Shelters	Evacuees Going to Friends	Evacuees Going to Hotel/Motel	Evacuees Going out of County	Total Evacuating Vehicles	Vehicles Going out of County
BAY COUNTY							
Category 1 low tourist occupancy	60,074	5,525	28,722	1,064	24,765	24,647	10,143
Category 1 low tourist (realistic)*	43,344	3,730	19,261	800	19,557	17,764	7,969
Category 1 high tourist occupancy	87,017	6,875	28,722	1,064	50,359	33,027	18,106
Category 2/3 low tourist occupancy	96,990	9,091	37,831	1,642	48,435	39,223	19,562
Category 2/3 high tourist occupancy	138,288	11,157	37,831	1,642	87,670	52,067	31,763
Category 4/5 low tourist occupancy	126,335	12,113	40,281	218	73,726	50,810	29,593
Category 4/5 high tourist occupancy	178,482	14,722	40,281	218	123,266	67,029	45,000
Category 4/5 high tourist (realistic)*	160,939	12,936	33,945	197	113,865	59,982	41,216
HOLMES COUNTY							
Category 1 low tourist occupancy	5,100	1,000					
Category 1 low tourist (realistic)*	N.A.						
Category 1 high tourist occupancy	5,100	1,000					
Category 2/3 low tourist occupancy	5,700	1,140					
Category 2/3 high tourist occupancy	5,700	1,140					
Category 4/5 low tourist occupancy	6,300	1,300					
Category 4/5 high tourist occupancy	6,300	1,300					
Category 4/5 high tourist (realistic)*	N.A.						

* Note: The realistic scenarios used participation rates less than 100 %.

Table 6-12 Washington Evacuating People & Vehicles
by Destination and Evacuation Scenario

	Total Evacuating People	Evacuees Going to Shelters	Evacuees Going to Friends	Evacuees Going to Hotel/Motel	Evacuees Going out of County	Total Evacuating Vehicles	Vehicles Going out of County
WASHINGTON COUNTY							
Category 1 low tourist occupancy	5,600	1,100					
Category 1 low tourist (realistic)*	N.A.						
Category 1 high tourist occupancy	5,600	1,100					
Category 2/3 low tourist occupancy	6,250	1,250					
Category 2/3 high tourist occupancy	6,250	1,250					
Category 4/5 low tourist occupancy	6,900	1,400					
Category 4/5 high tourist occupancy	6,900	1,400					
Category 4/5 high tourist (realistic)*	N.A.						

* Note: The realistic scenarios used participation rates less than 100 %.

In the 1986 behavioral analysis for the Tri-State study estimates were made for the specific destinations of evacuees leaving the Pensacola area and the Panama City area. The destinations by percent are shown on the next page. The precise numbers shown below should not be relied upon to a great extent, particularly those for the infrequently mentioned locations. However the responses do give a valid indication of the general patterns to expect, especially the most frequently mentioned places.

Evacuation Destinations shown in the 1986 Tri-State Study

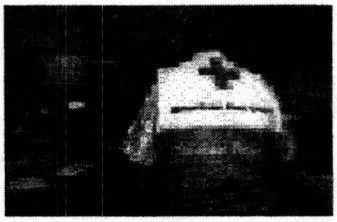
Pensacola Evacuation Destinations 1986 Study		Panama City Out-of-Town Destinations (Eloise)	
Percent	Destination	Percent	Destination
49	Pensacola	22	Dothan, Al.
9	Montgomery	8	Bonifay, Fl.
5	Alabama	7	Ft. Rucker
3	North	7	Panama City
3	Birmingham	4	Lynn Haven
2	Atmore, Al.	4	Birmingham
2	Tallahassee	3	Blountstown
1	Atlanta	3	Tallahassee
1	Bay Minette	3	Wewahitchka
1	Blakely, Ga.	3	Graceville
1	Cantonment	1.5	Campbelltown
1	Decatur, Al.	1.5	Troy, Al.
1	Ensley, Fl.	1.5	Eufaula, Al.
1	Georgianna, Fl.	1.5	Greenwood
1	Gulf Shores, Al.	1.5	Vernon
1	Mobile	1.5	Donaldson, Ga.
1	Molino, Fl.	1.5	Alabama
1	Monroe Co., Al.	1.5	Ella, Al.
1	Ozark, Al.	1.5	St. Anadrews
1	Saufley Field	1.5	Melville
10	Don't Know	1.5	Alta
		1.5	Highland Park
		1.5	Ashford, Al.
		1.5	Marianna
		1.5	Albany, Ga.
		1.5	Ozark, Al.
		1.5	Enterprise, Al.
		1.5	Huntsville, Al.
		1.5	Montgomery, Al.
		1.5	Ponce de Leon
		1.5	Geneva
		1.5	Hartford
		1.5	Bayou George

b. Shelter Demand/Capacity Considerations

In terms of public shelter demand and available capacity, except for Bay County, each county has appropriate in-county public shelter capacity for the higher categories of hurricanes. The potential public shelters shown in Chapter 5 include shelter locations and capacities.

In the transportation analysis for Bay County, after public shelters were filled even beyond the theoretical capacity, the remaining public shelter demand was distributed to in-county evacuation destination zones similar to the friends/relative trip type. Local churches and other civic groups may help with public sheltering needs. As the counties approach the year 2005, the need for in-county public shelter space may become greater, particularly if growth in mobile homes continues. Mobile home residents typically have a higher propensity to use local public shelter space than other residents.

Table 5-2 in Chapter 5 provides the calculated public shelter demand and available capacity by storm scenario for the coastal counties. (Shelter locations and capacities were provided by each county to the U.S. Army Corps of Engineers, Mobile District for the transportation analysis). Shelter space is generally adequate for most counties for in-county demand.



An important part of the transportation analysis involved looking beyond the coastal counties boundaries to anticipate potential inland traffic and shelter demand. Table 5-3 in Chapter 5 shows potential inland shelter demand figures for some major inland destinations. Using expected out-of-county evacuee statistics from the coastal counties and behavioral analysis guidance concerning intended destinations, estimates of inland shelter demand were tabulated. Total public shelter demand for an inland area is the sum of coastal evacuees who end up looking for or needing shelter in that area plus local evacuees (primarily mobile home residents) who desire public sheltering.

c. Traffic Volumes and Critical Roadway Segments

The Transportation Model Support Document Appendix provides the assigned evacuating vehicle figures by roadway segment for each Year 2000 storm scenario by county. In addition, the Appendix provides an evacuating vehicles to service volume ratio calculated for each roadway segment by scenario. Those segments with the highest evacuation vehicles to service volume ratio were considered to be critical links for evacuation under a particular scenario. These congested areas control the flow of evacuation traffic during a hurricane evacuation and are key areas for traffic control and monitoring. (These ratios should not be confused with the v/c ratios used in traffic engineering to describe Level of Service). Many of these same roadways will be carrying not only the evacuating public but also the non-evacuating public attempting to gather supplies and fuel for homes and vehicles.

Table 6-13 lists the critical roadway segments in each county that will control the flow of evacuation traffic. Critical links and intersections are listed in order of severity. These links control the flow of evacuation traffic during a hurricane evacuation and are key areas for traffic control and monitoring. Important to the study is the finding that the regions most congested roadway segments will be well inland. In terms of major hurricanes, one must look at the Alabama bottlenecks noted in the table beyond the Florida border. Table 6-14 provides potential numbers of evacuating vehicles which will exit Florida and enter Alabama at key locations and then goes on to show the traffic exiting each county and region by scenario and route and its impact on other counties.

Table 6-13 Critical roadway segments and intersections

Escambia County

I-65 on ramps in Escambia and Conecuh Counties, Al.
US29/US31 intersection in Flomaton, Alabama
US29 from I-10 northbound
I-10 eastbound on-ramps
Gulf Beach Highway (SR292)
I-10 northbound exit ramp to US29
Pensacola Bay Bridge
SR4 and US29 intersection

Santa Rosa County

(Escambia County locations)
SR87 eastbound on ramp to I-10
US90 from SR87 to Milton
Pensacola Bay Bridge
SR87 from Navarre to Milton
(Other I10 interchanges in county)
Avalon Blvd. From I10 to US90

Okaloosa County

Midbay Bridge and SR20 intersection
SR20 between Niceville and Midbay Bridge
SR123 and SR85 intersections
Eglin Parkway through Ft. Walton Beach
SR85 eastbound and westbound on-ramps to I-10
SR285 eastbound on-ramp to I-10 in Walton County
SR85 and US331 intersection in Florala, Alabama
SR 85 and US90 intersection
Martin Luther King Blvd. At US98 and Beal Pkwy.

Walton County

US331 and SR20 intersections
Choctawhatchee Bay Bridge
US331 I-10 east bound on-ramp
SR85 and US331 intersection in Florala, Alabama
US90 and US331 intersections

Bay County

US231 and SR20 intersection
Hathaway Bridge
I-10 eastbound on-ramp of US231 in Jackson County
US98 and US231 intersection
SR77 through Southport
SR77 I-10 eastbound on-ramp in Washington County
SR79 I-10 eastbound on-ramp in Holmes County
US231 and SR73 intersections in Jackson County
US231 intersections in Dothan, Alabama
Thomas Drive intersections
SR79 and US98 intersection
SR79 and SR20 intersection
SR 77 & SR 20 intersection

Washington County

SR77 and US90 intersection in Chipley
SR77 I-10 eastbound on-ramp
SR 77 & SR 20 intersection

Holmes County

SR79 and US90 intersections in Bonifay
SR79 I-10 eastbound on-ramp

Table 6-14 Traffic Volumes at State and County Lines

Florida Exiting Traffic to Alabama Routes by Storm Scenario
Total Vehicles/ (people)
STORM SCENARIOS

Alabama Entry Location	Cat. 1 Low occ.	Cat. 1 High occ.	Cat. 2-3 Low occ.	Cat. 2-3 High occ.	Cat. 4-5 Low occ.	Cat 4-5 High occ.
I-10 Westbound	4,499	5,971	7,513	9,629	12,730	15,083
	(11,248)	(14,928)	(18,703)	(24,073)	(31,825)	(37,708)
SR97/SR21	1,042	1,200	1,881	2,071	3,456	3,808
	(2,605)	(3,000)	(4,703)	(5,178)	(8,640)	(9,520)
US29/US31	3,888	4,332	6,576	7,125	11,835	12,839
	(9,720)	(10,830)	(16,440)	(17,813)	(29,588)	(32,098)
SR89/55	57	58	120	122	206	207
	(143)	(145)	(300)	(305)	(515)	(518)
SR87/41	879	1,076	1,465	1,667	2,273	2,485
	(2,198)	(2,690)	(3,663)	(4,168)	(5,683)	(6,213)
SR189/137	902	1,491	1,708	2,450	3,301	4,094
	(2,255)	(3,728)	(4,270)	(6,125)	(8,253)	(10,235)
SR85	975	1,598	1,863	2,596	4,234	5,039
	(2,438)	(3,995)	(4,658)	(6,490)	(10,585)	(12,598)
US331	1,659	2,783	2,909	5,083	3,879	6,064
	(4,148)	(6,958)	(7,273)	(12,708)	(9,698)	(15,160)
SR83/153	827	1,505	1,451	2,783	1,825	3,323
	(2,068)	(3,763)	(3,628)	(6,958)	(4,563)	(8,308)
SR79/167	700	1,500	900	1,900	1,400	3,100
	(1,750)	(3,750)	(2,250)	(4,750)	(3,500)	(7,750)
SR77/109	1,100	1,600	2,000	3,000	3,200	4,300
	(2,750)	(4,000)	(5,000)	(7,500)	(8,000)	(10,750)
US231	4,743	8,193	8,800	13,925	13,396	19,946
	(11,858)	(20,483)	(22,000)	(34,813)	(33,490)	(49,865)

Note: Vehicles converted to people using a 2.50 average people per evacuating vehicle assumption.

Table 6-14 Traffic Volumes at State and County Lines(continued)
COUNTIES AND REGIONS BY ROUTE AND SCENARIO

FROM

USING	Bay	Walton	Okaloosa	Santa Rosa	Escambia	Alabama
Escambia						
Pensacola Bay Bridge/I110						
1 low				3101	NA	
1 high				3146	NA	
2/3 low				3902	NA	
2/3 high				3950	NA	
4/5 low				6167	NA	
4/5 high				6290	NA	
US29 northbound						
1 low				1357	NA	
1 high				1375	NA	
2/3 low				1801	NA	
2/3 high				1820	NA	
4/5 low				2883	NA	
4/5 high				2932	NA	
US90						
1 low			10	34	NA	
1 high			10	34	NA	
2/3 low			18	71	NA	
2/3 high			18	71	NA	
4/5 low			40	123	NA	
4/5 high			40	123	NA	
I10 eastbound						
1 low				1395	NA	1500
1 high				1476	NA	2500
2/3 low				1756	NA	3000
2/3 high				1778	NA	5000
4/5 low				2775	NA	7000
4/5 high				2831	NA	10,000
I10 westbound						
1 low		400	1000	2065	NA	
1 high		800	1800	2165	NA	
2/3 low		800	2000	2758	NA	
2/3 high		1700	2900	2860	NA	
4/5 low		1000	3700	4354	NA	
4/5 high		1900	4600	4502	NA	

Table 6-14 Traffic Volumes at State and County Lines(continued)
COUNTIES AND REGIONS BY ROUTE AND SCENARIO

FROM

USING	Bay	Walton	Okaloosa	Santa Rosa	Escambia	Alabama
Santa Rosa						
US Hwy 90						
1 low		720	NA	41		
1 high		720	NA	41		
2/3 low		1437	NA	75		
2/3 high		1437	NA	75		
4/5 low		2695	NA	180		
4/5 high		2695	NA	180		
Pensacola Bay Bridge						
1 low				NA	2749	
1 high				NA	3427	
2/3 low				NA	2753	
2/3 high				NA	3433	
4/5 low				NA	2777	
4/5 high				NA	3456	
I10 eastbound						
1 low				NA	3132	1500
1 high				NA	3654	2500
2/3 low				NA	5839	3000
2/3 high				NA	6483	5000
4/5 low				NA	10684	7000
4/5 high				NA	11998	10,000
I10 westbound						
1 low		500	1073	NA		
1 high		900	1801	NA		
2/3 low		900	2025	NA		
2/3 high		1800	2952	NA		
4/5 low		1100	3712	NA		
4/5 high		2000	4680	NA		
Okaloosa						
I10 eastbound						
1 low			NA	2357	3000	1500
1 high			NA	2653	3600	2500
2/3 low			NA	3318	5800	3000
2/3 high			NA	4764	6400	5000
4/5 low			NA	5594	10800	7000
4/5 high			NA	5902	11900	10,000

Table 6-14 Traffic Volumes at State and County Lines(continued)
COUNTIES AND REGIONS BY ROUTE AND SCENARIO

FROM

USING	Bay	Walton	Okaloosa	Santa Rosa	Escambia	Alabama
Okaloosa						
I10 westbound						
1 low		537	NA			
1 high		927	NA			
2/3 low		993	NA			
2/3 high		1868	NA			
4/5 low		1181	NA			
4/5 high		2055	NA			
US90						
1 low		7	NA	129	41	1500
1 high		7	NA	156	41	2500
2/3 low		14	NA	229	75	3000
2/3 high		14	NA	255	75	5000
4/5 low		26	NA	361	180	7000
4/5 high		26	NA	387	180	10,000
SR20						
1 low	169		NA			
1 high	174		NA			
2/3 low	456		NA			
2/3 high	504		NA			
4/5 low	759		NA			
4/5 high	817		NA			
Bay						
SR20						
1 low	NA	169	207			
1 high	NA	292	345			
2/3 low	NA	296	386			
2/3 high	NA	586	575			
4/5 low	NA	325	590			
4/5 high	NA	618	775			

Table 6-14 Traffic Volumes at State and County Lines(continued)
COUNTIES AND REGIONS BY ROUTE AND SCENARIO

FROM

USING	Bay	Walton	Okaloosa	Santa Rosa	Escambia	Alabama
Walton						
I10 eastbound						
1 low		NA	3278	2300	2900	1000
1 high		NA	5582	2600	3500	2000
2/3 low		NA	6368	3500	5700	2000
2/3 high		NA	9256	3750	6300	4000
4/5 low		NA	11347	5500	10700	6000
4/5 high		NA	14354	3900	11800	9000
SR 285						
1 low		NA	1397			1500
1 high		NA	2371			2500
2/3 low		NA	2602			3000
2/3 high		NA	3919			5000
4/5 low		NA	3865			7000
4/5 high		NA	5194			10,000
CR 1087/US 3331						
1 low		NA	797			
1 high		NA	1271			
2/3 low		NA	1302			
2/3 high		NA	2019			
4/5 low		NA	1965			
4/5 high		NA	2694			
SR285						
1 low		NA	975			
1 high		NA	1598			
2/3 low		NA	1868			
2/3 high		NA	2596			
4/5 low		NA	4234			
4/5 high		NA	5039			
US90						
1 low	116	NA	817	100	20	
1 high	273	NA	1291	150	20	
2/3 low	141	NA	1339	200	20	
2/3 high	307	NA	2056	250	37	
4/5 low	264	NA	2060	325	90	
4/5 high	596	NA	2789	375	90	

Table 6-14 Traffic Volumes at State and County Lines(continued)
COUNTIES AND REGIONS BY ROUTE AND SCENARIO

USING	FROM Bay	Walton	Okaloosa	Santa Rosa	Escambia	Apalachee	Alabama
Walton							
SR20							
1 low	169	NA	207				
1 high	174	NA	345				
2/3 low	456	NA	386				
2/3 high	504	NA	575				
4/5 low	759	NA	590				
4/5 high	819	NA	779				
US98/ SR83							
1 low	116	NA					
1 high	273	NA					
2/3 low	141	NA					
2/3 high	307	NA					
4/5 low	264	NA					
4/5 high	596	NA					
Jackson							
US231 (south of I10)							
1 low	5923						
1 high	10526						
2/3 low	12232						
2/3 high	19785						
4/5 low	18186						
4/5 high	26954						
US231 (north of I10)							
1 low	3800			600		343	
1 high	7200			650		343	
2/3 low	7600			800		400	
2/3 high	12700			825		400	
4/5 low	11500			1300		596	
4/5 high	18000			1350		596	
I10 Eastbound							
1 low	2300	700	3278	1600	2700		1000
1 high	4200	1400	5582	1850	3300		2000
2/3 low	4800	1500	6368	2600	5500		2000
2/3 high	7900	2800	9256	2825	6100		4000
4/5 low	7200	1600	11347	4100	10500		6000
4/5 high	10700	3000	14354	4450	11600		9000

Table 6-14 Traffic Volumes at State and County Lines(continued)
COUNTIES AND REGIONS BY ROUTE AND SCENARIO

FROM

USING	Bay	Walton	Okaloosa	Santa Rosa	Escambia	Alabama
Holmes						
SR79						
1 low	1350					
1 high	3121					
2/3 low	1829					
2/3 high	3977					
4/5 low	2953					
4/5 high	6468					
I10 Eastbound						
1 low		858	3278	2200	2900	1000
1 high		1469	4592	2500	3500	2000
2/3 low		1565	6368	3400	5700	2000
2/3 high		2904	9256	3650	6300	4000
4/5 low		1738	11347	5400	10700	6000
4/5 high		3078	14354	5800	11800	9000
SR81						
1 low		300				
1 high		600				
2/3 low		600				
2/3 high		1300				
4/5 low		700				
4/5 high		1400				
US90						
1 low	600	297	20	50	20	
1 high	1500	297	20	75	20	
2/3 low	900	321	37	100	37	
2/3 high	1900	321	37	125	37	
4/5 low	1500	385	95	160	90	
4/5 high	3200	385	95	180	90	

Table 6-14 Traffic Volumes at State and County Lines(continued)
COUNTIES AND REGIONS BY ROUTE AND SCENARIO

FROM

USING	Bay	Walton	Okaloosa	Santa Rosa	Escambia	Apalachee Region	Alabama
Washington							
SR79							
1 low	1350						
1 high	3121						
2/3 low	1829						
2/3 high	3977						
4/5 low	2953						
4/5 high	6468						
SR771							
1 low	1167						
1 high	1795						
2/3 low	2184						
2/3 high	3239						
4/5 low	3403						
4/5 high	4608						
SR20							
1 low		160	207				
1 high		292	345				
2/3 low		296	386				
2/3 high		586	575				
4/5 low		325	590				
4/5 high		618	779				
I10 Eastbound							
1 low		700	3278	2200	2800		
1 high		1400	5582	2500	3400		
2/3 low		1500	6368	3400	5600		
2/3 high		2800	9256	3650	6200		
4/5 low		1600	11347	5400	10800		
4/5 high		3000	14354	5800	11700		
US90							
1 low	600	250	10	50	20		
1 high	1500	250	10	50	20		
2/3 low	900	300	18	100	37		
2/3 high	1900	300	18	125	37		
4/5 low	1500	350	50	160	90		
4/5 high	3200	350	50	180	90		

d. Estimated Evacuation Clearance Times

The most important product of the transportation analysis is the clearance times developed by storm scenario and by behavioral characteristics for each county. Clearance time is one of two major considerations involved in issuing an evacuation or storm advisory. Clearance time must be weighed with respect to the arrival of sustained tropical storm winds to make a prudent evacuation decision. Figure 6-3 illustrates these two timing issues of evacuation and their relation.

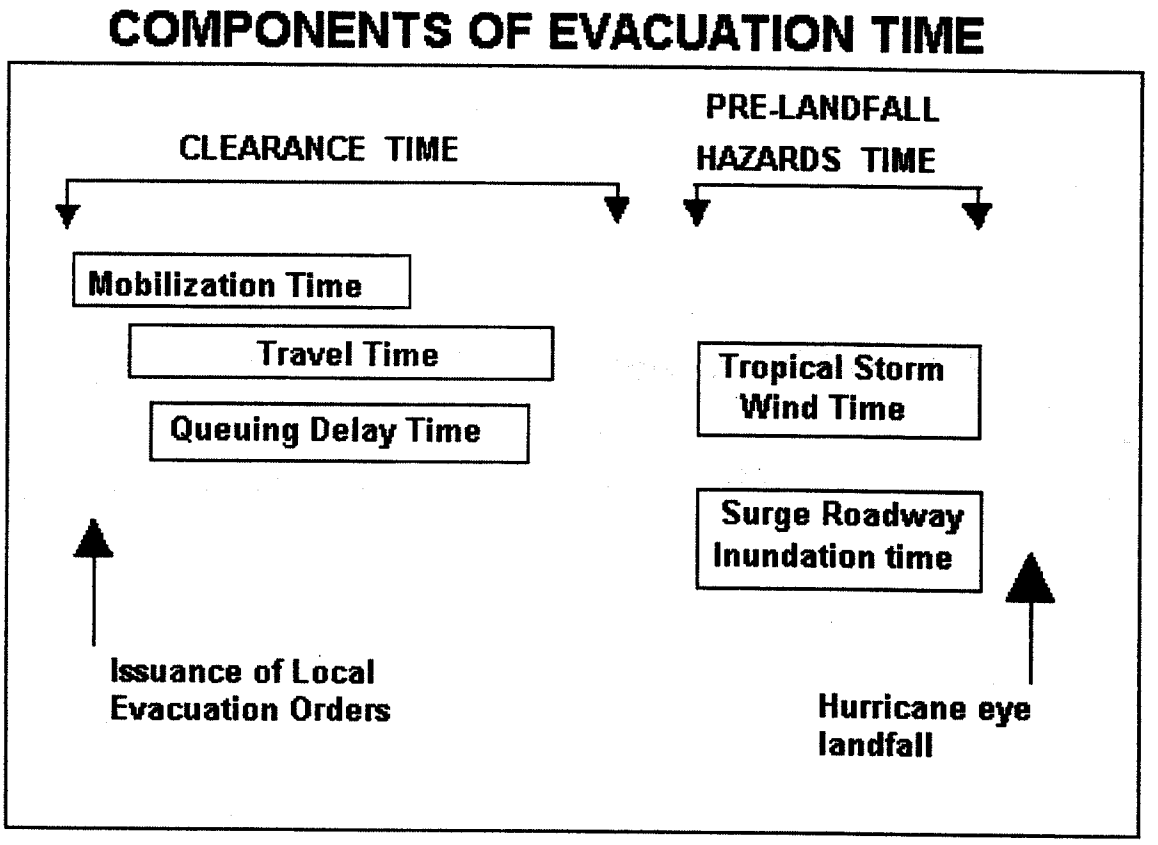


Figure 6-3 Components of Evacuation Time

Clearance time is the time required to clear the roadway of all vehicles evacuating in response to a hurricane situation. Clearance time begins when the first evacuating vehicle enters the road network (as defined by a hurricane evacuation behavioral response curve) and ends when the last evacuating vehicle reaches an assumed point of safety. Clearance time includes the time required by evacuees to secure their homes and prepare to leave (referred to as mobilization time), the time spent by evacuees traveling along the road network (referred to as travel time), and the time spent by evacuees waiting along the road network due to traffic congestion (referred to as queuing delay time). Clearance time does not relate to the time any one vehicle spends traveling on the road network and does not include time needed for local officials to assemble and make a decision to evacuate.

Tables 6-15 through 6-23presents the hurricane evacuation clearance times developed for each county for the Year 2000 and 2005 storm scenarios. Over 400 clearance time runs were accomplished based on differing intensity of hurricanes, evacuation area assumptions, rapidity of evacuees' response, and differing tourist seasons. Clearance times generally fall below 24 hours for all of the Year 2000 scenarios. It is possible that by the year 2005 some worst case scenarios will be greater than 24 hours. **Although clearance times are provided for scenarios where less than 100% of the vulnerable population participates in the evacuation, it is imperative that for public safety purposes, the 100% participation clearance times be used so that all vulnerable residents have the opportunity to evacuate.** Clearance times reflect the effects of adjacent county traffic impacts and in that regard assume that consistent evacuation decisions will be made and coordinated between adjacent jurisdictions and the State of Florida EOC.

The longest clearance times for any scenario are those associated with northbound out of region traffic movements where Alabama is also conducting a significant evacuation of it's coast. Out of region clearance time tables are provided for the northbound and eastbound movements. Tables for each county are provided and should be used for evacuation decision making. The exception to this would be for Escambia and perhaps Santa Rosa County where the out of region (northbound) table should be used when Alabama is conducting an evacuation concurrently. This northbound out of region table will need to be updated once the Alabama coast has its hurricane evacuation study updated. The Garcon Point/Santa Rosa Bay Bridge once constructed, should help relieve some evacuation traffic congestion in Pensacola but will not do much to reduce overall clearance times due to the location of bottlenecks.

Table 6-15 Out of Region (northbound) Clearance times
YEAR 2000 (in hours)

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	13	16 ½
Medium Response	13 ¼	16 ¾
Long Response	14 ¼	17 ½
Category 2-3 Hurricane		
Rapid Response	16 ¾	19 ½
Medium Response	17	20
Long Response	17 ¾	20 ¾
Category 4-5 Hurricane		
Rapid Response	20 ¾	23 ½
Medium Response	21 ¼	23 ¾
Long Response	21 ¾	24 ½

PROJECTED YEAR 2005
CLEARANCE TIMES (in hours)
Out of Region (northbound)

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	15	19
Medium Response	15 ¼	19 ¼
Long Response	16 ½	20 ¼
Category 2-3 Hurricane		
Rapid Response	19 ¼	21¾
Medium Response	19 ½	23
Long Response	20 ½	24
Category 4-5 Hurricane		
Rapid Response	24	27
Medium Response	24 ½	27 ¼
Long Response	25	28 ¼

Table 6-16 Out of Region (eastbound) Clearance Times
YEAR 2000 (in hours)

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	(See local times)	(See local times)
Medium Response	(See local times)	(See local times)
Long Response	(See local times)	(See local times)
Category 2-3 Hurricane		
Rapid Response	8 ¼	11 ½
Medium Response	9	12
Long Response	10	12 ¾
Category 4-5 Hurricane		
Rapid Response	14	18 (15)
Medium Response	14 ¼	18 ¼ (15 ¼)
Long Response	15 ¼	19 (16)

PROJECTED YEAR 2005 CLEARANCE TIMES (in hours)
Out of Region (eastbound)

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	(See local times)	(See local times)
Medium Response	(See local times)	(See local times)
Long Response	(See local times)	(See local times)
Category 2-3 Hurricane		
Rapid Response	9 ½	13 ¼
Medium Response	10 ½	13 ¾
Long Response	11 ½	14 ¾
Category 4-5 Hurricane		
Rapid Response	16	20 ¾ (17 ¼)
Medium Response	16 ½	21 (17 ½)
Long Response	17 ½	21 ¾ (18 ½)

Note: Times in parentheses reflect using participation rates of less than 100% in the areas to be evacuated.

Table 6-17 Escambia County - In County Clearance Times
YEAR 2000 (in hours)

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	7 ¼ (5 ¼)	7 ¾
Medium Response	8 ¼ (6 ¼)	8 ½
Long Response	9 ½ (9 ¼)	10
Category 2-3 Hurricane		
Rapid Response	10	10 ½
Medium Response	10 ¾	11 ¼
Long Response	12 ¼	12 ¾
Category 4-5 Hurricane		
Rapid Response	15	16 ¼ (15 ¼)
Medium Response	16	17 ¼ (16 ¼)
Long Response	17 ½	18 ½ (17 ½)

PROJECTED YEAR 2005 CLEARANCE TIMES (in hours)
Escambia County - In County

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	8 (5 ¾)	8 ½
Medium Response	9 (7)	9 ¼
Long Response	10 ½ (10 ¼)	11
Category 2-3 Hurricane		
Rapid Response	11	11 ½
Medium Response	11 ¾	12 ½
Long Response	13 ½	14
Category 4-5 Hurricane		
Rapid Response	16 ½	17 ¾ (16 ¾)
Medium Response	17 ½	19 (17 ¾)
19 1/4Long Response	(19 ¼)	20 ¼ (19 ¼)

Note:Times in parentheses reflect using participationrates of less than 100% in the areas to be evacuated.

Table 6-18 Santa Rosa County Clearance Times
YEAR 2000 (in hours)

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	7 (5 ¼)	7 ¼
Medium Response	8 (6 ¼)	8 1/2
Long Response	9 ¾ (9 ¼)	10
Category 2-3 Hurricane		
Rapid Response	7 ¾	8
Medium Response	9	9 ¼
Long Response	10 ¾	11
Category 4-5 Hurricane		
Rapid Response	9	9 ¼ (8 ¼)
Medium Response	10 ¼	10 ½ (9 ½)
19 1/4Long Response	12	12 ¼ (11 ¼)

PROJECTED YEAR 2005 CLEARANCE TIMES (in hours)
Santa Rosa County

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	8 ½ (6 ½)	8 ¾
Medium Response	9 ¾ (7 ½)	10 ¼
Long Response	11 ¾ (11 ¼)	12 ¼
Category 2-3 Hurricane		
Rapid Response	9 ½	9 ¾
Medium Response	11	11 ¼
Long Response	13	13 ½
Category 4-5 Hurricane		
Rapid Response	11	11 ¼ (10)
Medium Response	12 ½	12 ¾ (11 ½)
19 1/4Long Response	14 ½	15 (13 ¼)

Note: Times in parentheses reflect using participation rates of less than 100% in the areas to be evacuated.

Table 6-19 Okaloosa County Clearance Times
YEAR 2000 (in hours)

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	8 ½ (7 ¼)	12
Medium Response	10 (8 ¾)	13 ½
Long Response	12 (11)	15 ½
Category 2-3 Hurricane		
Rapid Response	13	17 ¾
Medium Response	14 ½	19 ¼
Long Response	16 ½	21 ½
Category 4-5 Hurricane		
Rapid Response	15 ½	20 ¼ (18 ¾)
Medium Response	17	21 ¾ (20 ¼)
19 1/4Long Response	19 ¼	24 (22 ½)

PROJECTED YEAR 2005 CLEARANCE TIMES (in hours)
Okaloosa County

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	10 ¼ (8 ¾)	14 ½
Medium Response	12 (10 ½)	16 ¼
Long Response	14 ½ (13 ¼)	18 ½
Category 2-3 Hurricane		
Rapid Response	15 ½	21 ¼
Medium Response	17 ½	23 ¼
Long Response	19 ¾	25 ¾
Category 4-5 Hurricane		
Rapid Response	18 ½	24 ¼ (22 ½)
Medium Response	20 ½	26 ¼ (24 ¼)
19 1/4Long Response	23 ¼	29 (27)

Note: Times in parentheses reflect using participation rates of less than 100% in the areas to be evacuated.

Table 6-20 Walton County Clearance Times
YEAR 2000 (in hours)

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	7 ½ (5) 6 ¼ (4 ½)	11 ¼ (7)
Medium Response	8 ¼ (6 ½) 7 (6 ½)	11 ¾ (7 ¾)
Long Response	9 ½ (9 ½) 9 ½ (9 ½)	12 ¾ (9 ½)
Category 2-3 Hurricane		
Rapid Response	12 ¼ (7 ½)	20 ½ (12 ½)
Medium Response	12 ¾ (8 ¼)	21 (12 ¾)
Long Response	13 ¾ (9 ½)	21 ¾ (13 ½)
Category 4-5 Hurricane		
Rapid Response	12 ½ (7 ½)	21 (12 ½) 19 ¾ (11 ¾)
Medium Response	13 (8 ¼)	21 ½ (13) 20 ¼ (12 ¼)
19 1/4Long Response	14 (9 ½)	22 ¼ (13 ¾) 21 (13)

PROJECTED YEAR 2005 CLEARANCE TIMES (in hours)
Walton County

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	8 ½ (5) 7 (5)	12 ¾ (8)
Medium Response	9 ¼ (7 ½) 8 (7 ¼)	13 ¼ (8 ¾)
Long Response	10 ¾ (10 ¾) 10 ¾ (10 ¾)	14 ¼ (11)
Category 2-3 Hurricane		
Rapid Response	13 ¾ (8 ½)	23 (14)
Medium Response	14 ½ (9 ¼)	23 ½ (14 ½)
Long Response	15 ½ (10 ¾)	24 ½ (15 ¼)
Category 4-5 Hurricane		
Rapid Response	14 (8 ½)	23 ½ (14) 22 ¼ (13 ¼)
Medium Response	14 ¾ (9 ¼)	24 ¼ (14 ½) 22 ¾ (13 ¾)
19 1/4Long Response	15 ¾ (10 ¾)	25 (15 ½) 23 ½ (14 ½)

Note: Times in parentheses reflect reverse laning on US 331; double set of times for first and last group of scenarios is based on using participation rates of less than 100% in the areas to be evacuated.

Table 6-21 Bay County Clearance Times
YEAR 2000 (in hours)

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	6 ¾ (5 ¾)	11
Medium Response	7 ½ (6 ½)	11 ½
Long Response	9 ½ (9 ½)	12 ¾
Category 2-3 Hurricane		
Rapid Response	9 ¾	14 ¼
Medium Response	10 ¼	14 ¾
Long Response	11 ¼	15 ½
Category 4-5 Hurricane		
Rapid Response	13 ¼	18 ½ (16 ¼)
Medium Response	13 ½	18 ¾ (17 ¼)
19 1/4Long Response	14 ¼	19 ½ (17 ¾)

PROJECTED YEAR 2005 CLEARANCE TIMES (in hours)
Bay County

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	7 ½ (6 ½)	12 ¼
Medium Response	8 ½ (7 ¼)	12 ¾
Long Response	10 ½ (10 ½)	14 ¼
Category 2-3 Hurricane		
Rapid Response	11	16
Medium Response	11 ½	16 ½
Long Response	12 ½	17 ¼
Category 4-5 Hurricane		
Rapid Response	14 ¾	20 ½ (18)
Medium Response	15	21 (19 ¼)
19 1/4Long Response	16	21 ¾ (19 ¾)

Note: Times in parentheses reflect using participation rates of less than 100% in the areas to be evacuated.

Table 6-22 Holmes County Clearance Times
YEAR 2000 (in hours)

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	4 ¼ (4 ¼)	5 ¼
Medium Response	6 ¼ (6 ¼)	6 ¼
Long Response	9 ¼ (9 ¼)	9 ¼
Category 2-3 Hurricane		
Rapid Response	4 ¼	6 ½
Medium Response	6 ¼	7
Long Response	9 ¼	9 ¼
Category 4-5 Hurricane		
Rapid Response	5 ¼	9 ½ (8 ¼)
Medium Response	6 ¼	10 ¼ (9)
19 1/4Long Response	9 ¼	11 ¼ (10)

PROJECTED YEAR 2005 CLEARANCE TIMES (in hours)
Holmes County

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	4 ¼ (4 ¼)	5 ½
Medium Response	6 ¼ (6 ¼)	6 ¼
Long Response	9 ¼ (9 ¼)	9 ¼
Category 2-3 Hurricane		
Rapid Response	4 ¼	7
Medium Response	6 ¼	8
Long Response	9 ¼	9 ¼
Category 4-5 Hurricane		
Rapid Response	5 ¾	10 (8 ¾)
Medium Response	6 ¼	10 ¼ (9 ¾)
19 1/4Long Response	9 ¼	11 ½ (10 ½)

Note: Times in parentheses reflect using participation rates of less than 100% in the areas to be evacuated.

Table 6-23 Washington County Clearance Times
YEAR 2000 (in hours)

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	4 ¼ (4 ¼)	4 ¼
Medium Response	6 ¼ (6 ¼)	6 ¼
Long Response	9 ¼ (9 ¼)	9 ¼
Category 2-3 Hurricane		
Rapid Response	4 ½	5 ¾
Medium Response	6 ¼	6 ½
Long Response	9 ¼	9 ¼
Category 4-5 Hurricane		
Rapid Response	6 ¼	7 ¾ (6 ¾)
Medium Response	7	8 ½ (7 ¾)
19 1/4Long Response	9 ¼	9 ¾ (9 ¼)

PROJECTED YEAR 2005 CLEARANCE TIMES (in hours)
Washington County

	Low Seasonal	High Seasonal
Category 1 Hurricane	Occupancy	Occupancy
Rapid Response	4 ¼ (4 ¼)	4 ¼
Medium Response	6 ¼ (6 ¼)	6 ¼
Long Response	9 ¼ (9 ¼)	9 ¼
Category 2-3 Hurricane		
Rapid Response	4 ½	6 ¼
Medium Response	6 ¼	6 ¾
Long Response	9 ¼	9 ¼
Category 4-5 Hurricane		
Rapid Response	6 ¼	8 ¼ (7 ¼)
Medium Response	7 ½	8 ¾ (8 ¼)
19 1/4Long Response	9 ¼	10 ¼ (9 ¾)

Note: Times in parentheses reflect using participation rates of less than 100% in the areas to be evacuated.

TIME CONSTRAINED EVACUATIONS

Evacuation clearance times calculated for Northwest Florida are generally 24 hours or less. However, there will be storms with unusual meteorological characteristics and/or late behavioral response (like Hurricane Opal) where it is possible that only 18 or even 12 hours are available for evacuation movements. This could impact the number of evacuees who are able to make their desired evacuation movement.

For northwest Florida, this would primarily be a problem for Escambia, Okaloosa and Bay Counties where times exceed 12 hours of clearance time. For Santa Rosa and Walton Counties evacuation movements can work within a 12 hour time frame as long as evacuees are warned of traffic conditions for long out-of-county movements (i.e. I-10 eastbound, I-65 northbound) and are encouraged to stay in county. Walton County has the option of reverse laning US331 to get their times within a possible 12 hour window. Table 6-24 provides rough estimates of evacuees not able to make their desired evacuation movement due to time constrained evacuation. Bottlenecks would remain as those specified in Table 6-13.

Table 6-24 Evacuating People Statistics for Time Constrained Evacuations

Applicable County/ Scenario	Max. Unconstrained Evacuating Population	18 Hour Constrained Evacuating Population	12 Hour Constrained Evacuating Population
Escambia County			
Cat. 4-5 Low tourist occupancy	137,000 people	no reduction	118,200 people
Cat. 4-5 High tourist occupancy	147,000	145,200	123,900
Okaloosa County			
Cat. 2-3 Low tourist occupancy	68,100	no reduction	59,500
Cat. 2-3 High tourist occupancy	88,400	81,300	69,200
Cat. 4-5 Low tourist occupancy	110,000	107,600	96,000
Cat. 4-5 High tourist occupancy	131,100	119,600	107,200
Bay County			
Cat. 2-3 High tourist occupancy	138,300	no reduction	121,500
Cat. 4-5 Low tourist occupancy	126,300	no reduction	116,200
Cat. 4-5 High tourist occupancy	178,500	171,300	142,600

TRAFFIC CONTROL MEASURES

Some general recommendations concerning traffic control are as follows:

- ~ Where counties have sufficient personnel resources, officers should be stationed at critical intersections to facilitate traffic flow. Where intersections will continue to have signalized control, signal patterns providing the most "green time" for the predominant evacuation travel direction should be activated.

- ~ If possible, arrangements should be made with tow truck operators so that they are pre-positioned along key travel corridors and critical roadway facilities such as bridges.

- ~ All draw/swing bridges needed for evacuation should be locked in the "down" position during a hurricane warning if possible. Boat owners must be made aware of flotilla plans and time requirements for securing vessels.

- ~ The state and counties should jointly work on a statewide evacuation and shelter monitoring system which would monitor travel flow at key locations and report traffic tie ups/shelter availability to the general public as they evacuate.

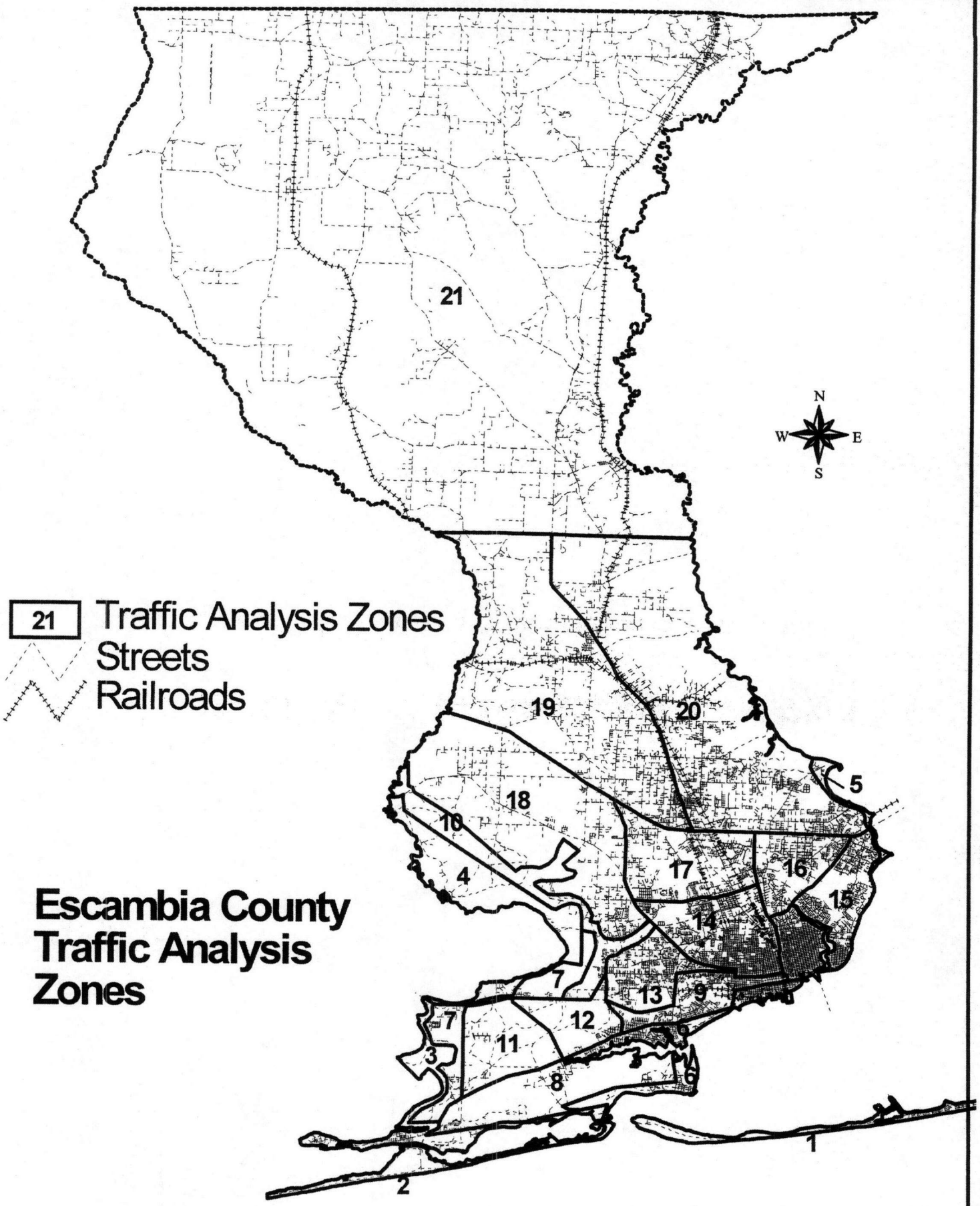
- ~ The modeling conducted for the study assumes modest levels of eastbound SR20 evacuation traffic. Diverting this traffic northbound would reduce conflicts with evacuation traffic on major northbound routes out of Bay County. However, it might also produce unnecessary hardship on those who are traveling to homes of friends and relatives in this part of the region. This issue needs to be discussed at regional evacuation planning meetings.

- ~ Coordination with Alabama on traffic management and sheltering is critical to successful evacuations for northwest Florida. Table 3-3 in this report provided potential traffic volumes which would enter Alabama at different locations. At Flomaton, the two northbound lanes of evacuation traffic coming out of Florida must be maintained. Several connector highways to I65 are available for traffic diversion. When traffic starts to backup on the connectors due to ramp or merging congestion, traffic should be encouraged to continue northbound on US31. Likewise, northbound traffic on US231

will need to be managed around Dothan so that urban intersections do not hamper the flow of traffic. Communication to evacuees of hotel availability in Montgomery and Birmingham would be helpful as well.

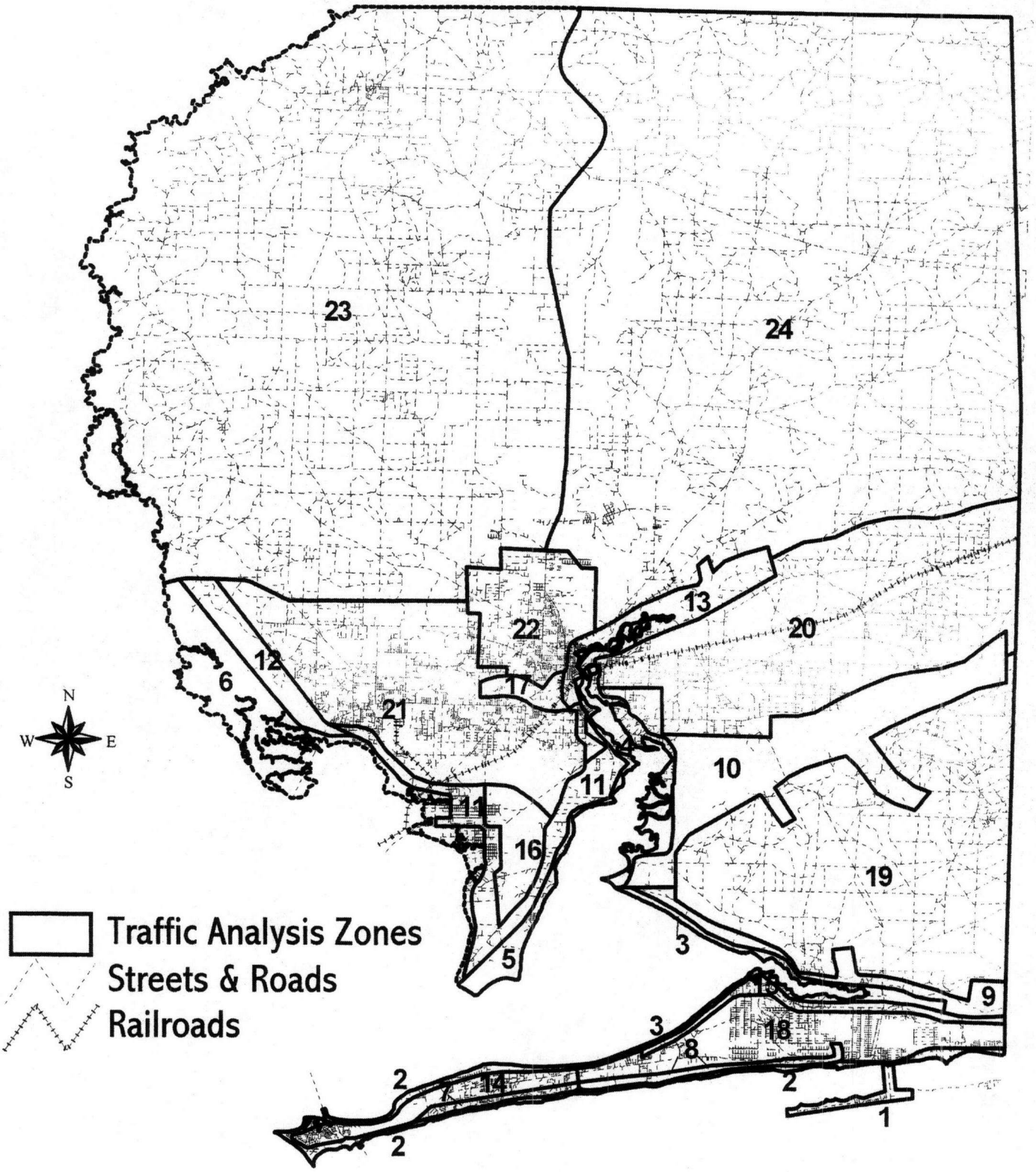
~ Inland bottlenecks in Holmes and Washington Counties must be managed during an evacuation to keep northbound traffic moving along the two lane rural highways. If there is a coastal evacuation, Ebro and Vernon along SR79 and Wausau and Chipley along SR77 can become quite congested with traffic out of Bay County. This could be a problem for residents of Washington County who are evacuating mobile homes and low lying areas to go to local shelter and who are waiting on side roads to enter the traffic stream.

~ As long as two northbound lanes of traffic are kept moving on US231 out of Panama City there really is not much benefit in reverse laning a portion of or all of the southbound lanes. This is because the bottleneck between the Hathaway Bridge and the intersection of US231/US98 still has to be negotiated by most US231 northbound traffic and the best we can do is two northbound lanes in this area.



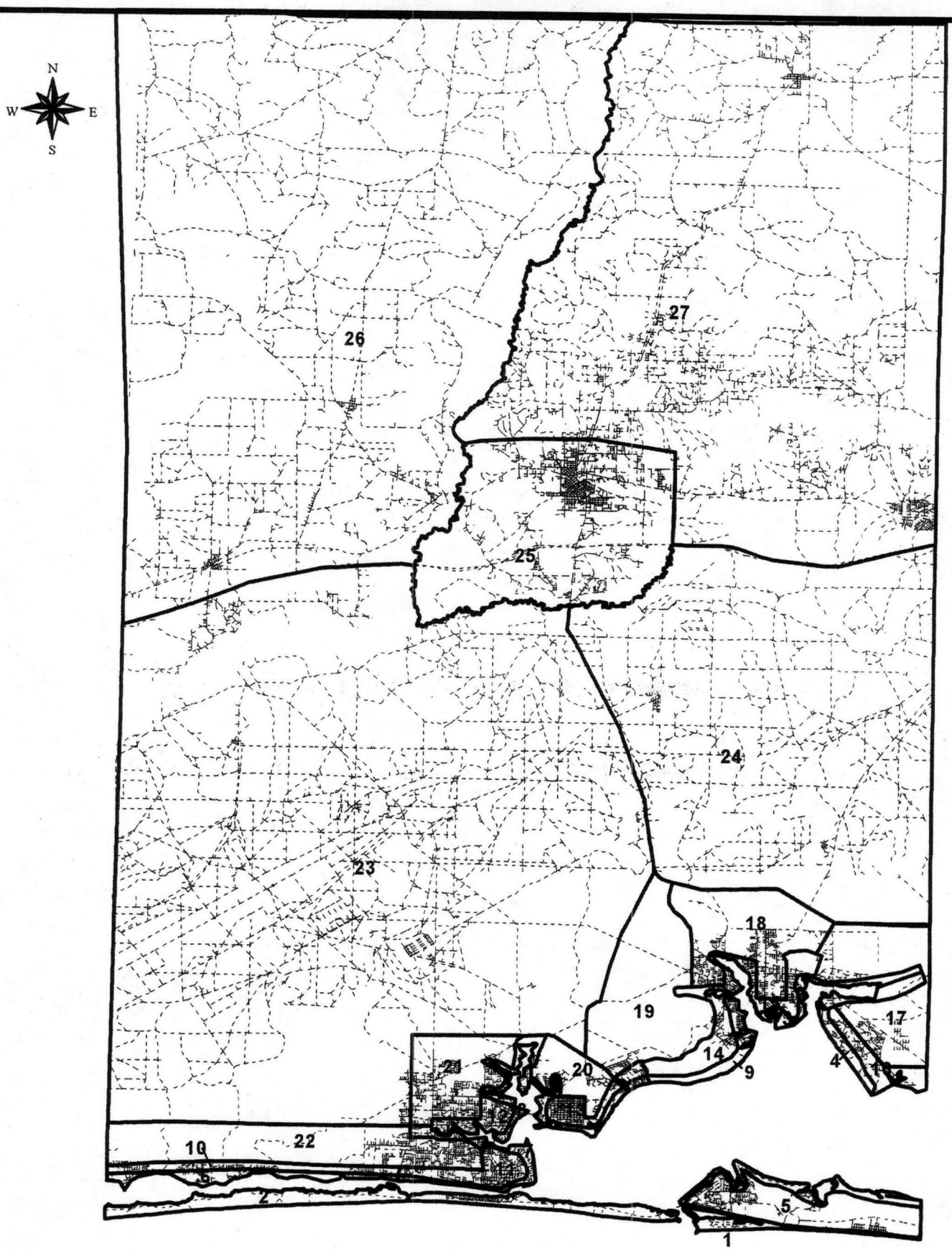
Escambia County Traffic Analysis Zones

Plate 6-1



Santa Rosa County Traffic Analysis Zones

Plate 6-2

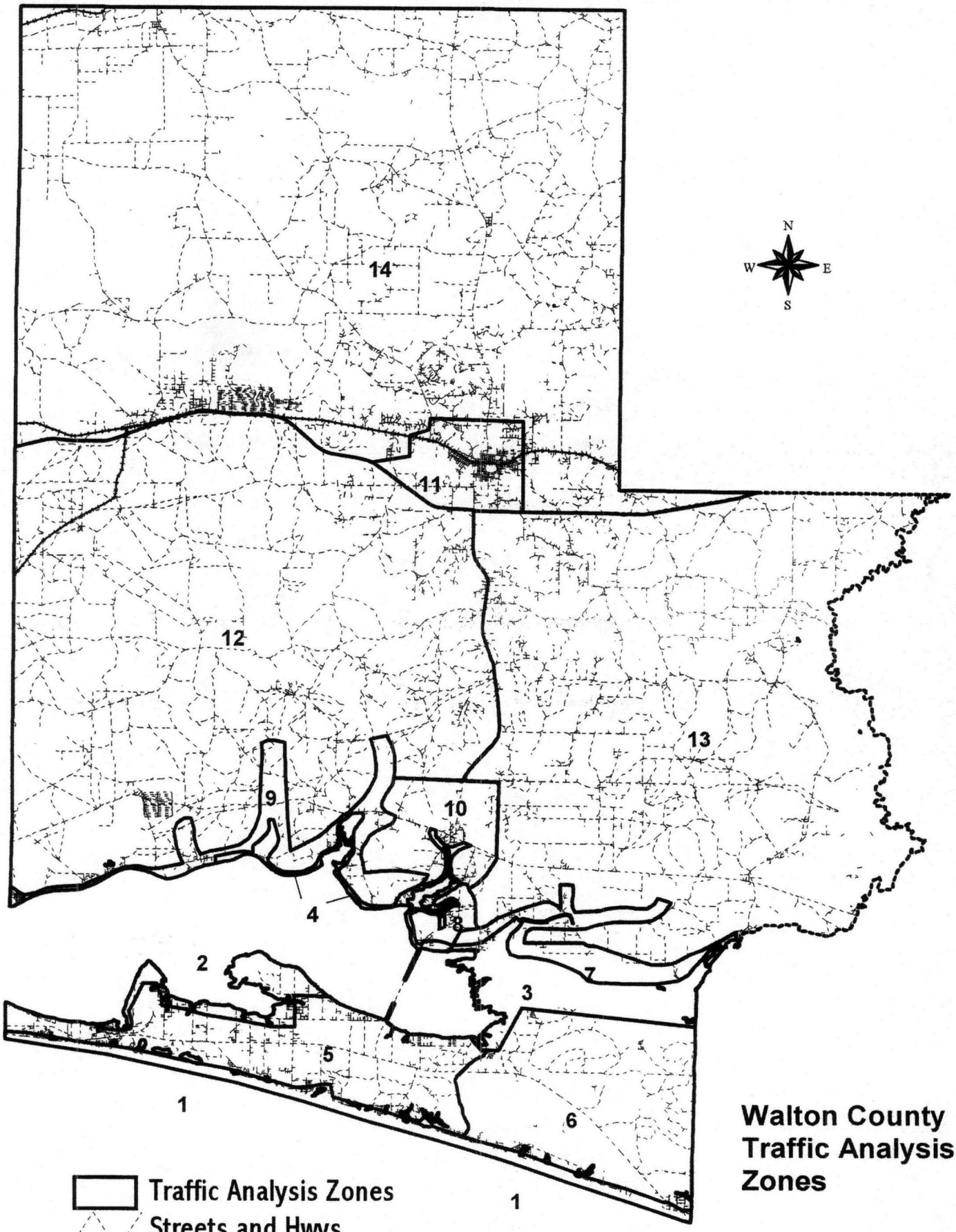


Traffic Analysis Zones

Streets

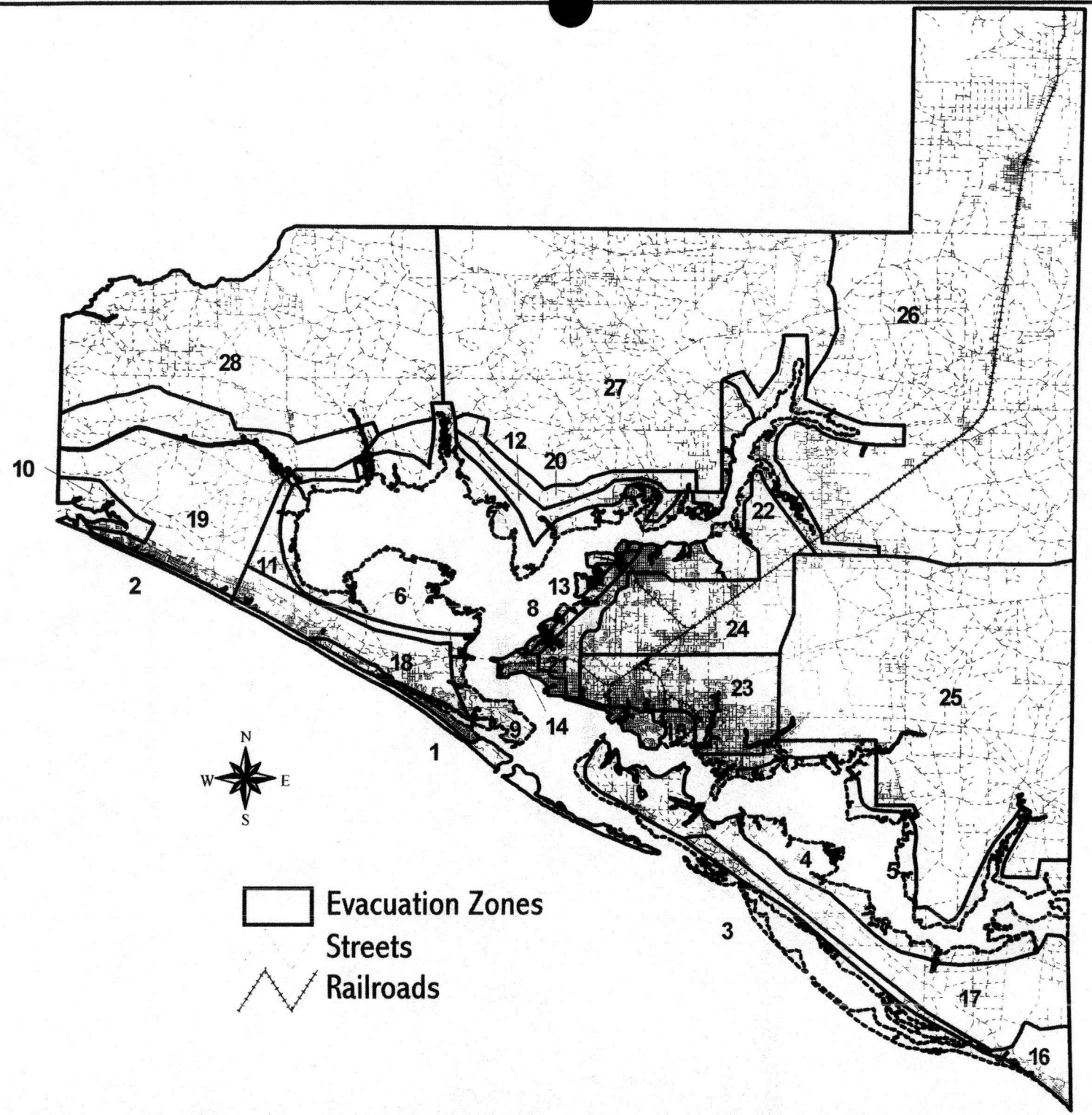
Okaloosa County Traffic Analysis Zones

Plate 6-3



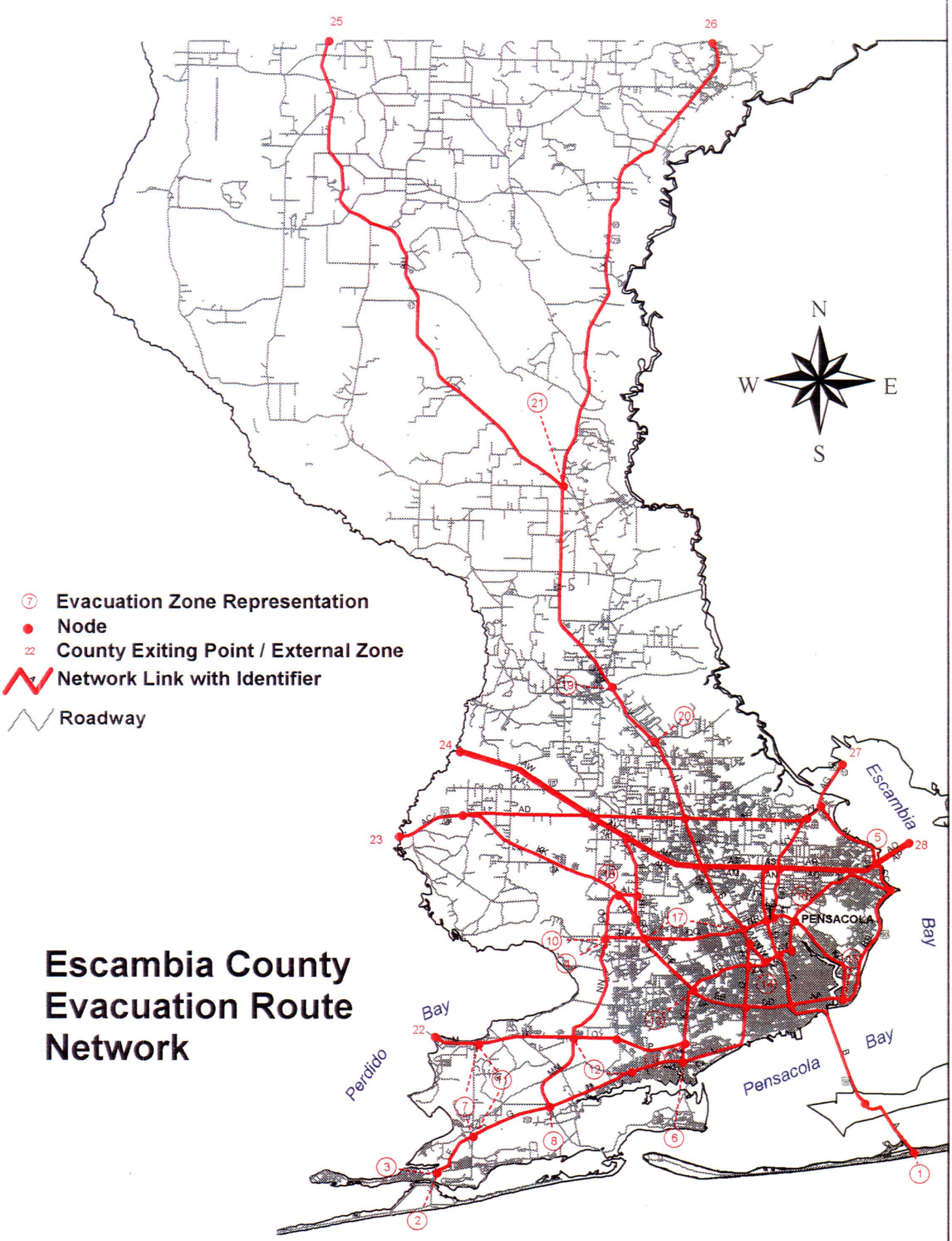
Walton County Traffic Analysis Zones

Plate 6-4



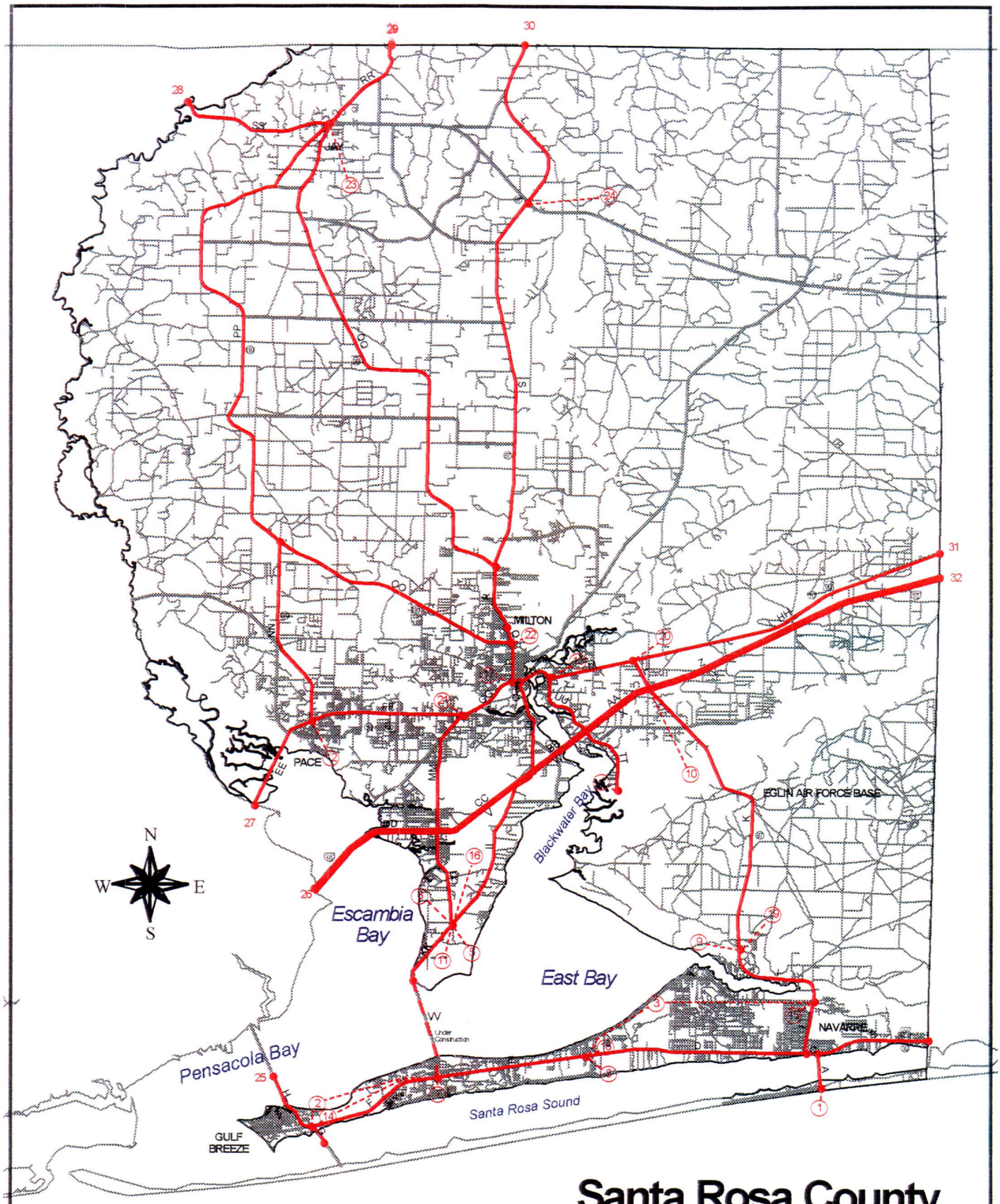
Bay County Traffic Analysis Zones

Plate 6-5



Escambia County Evacuation Route Network

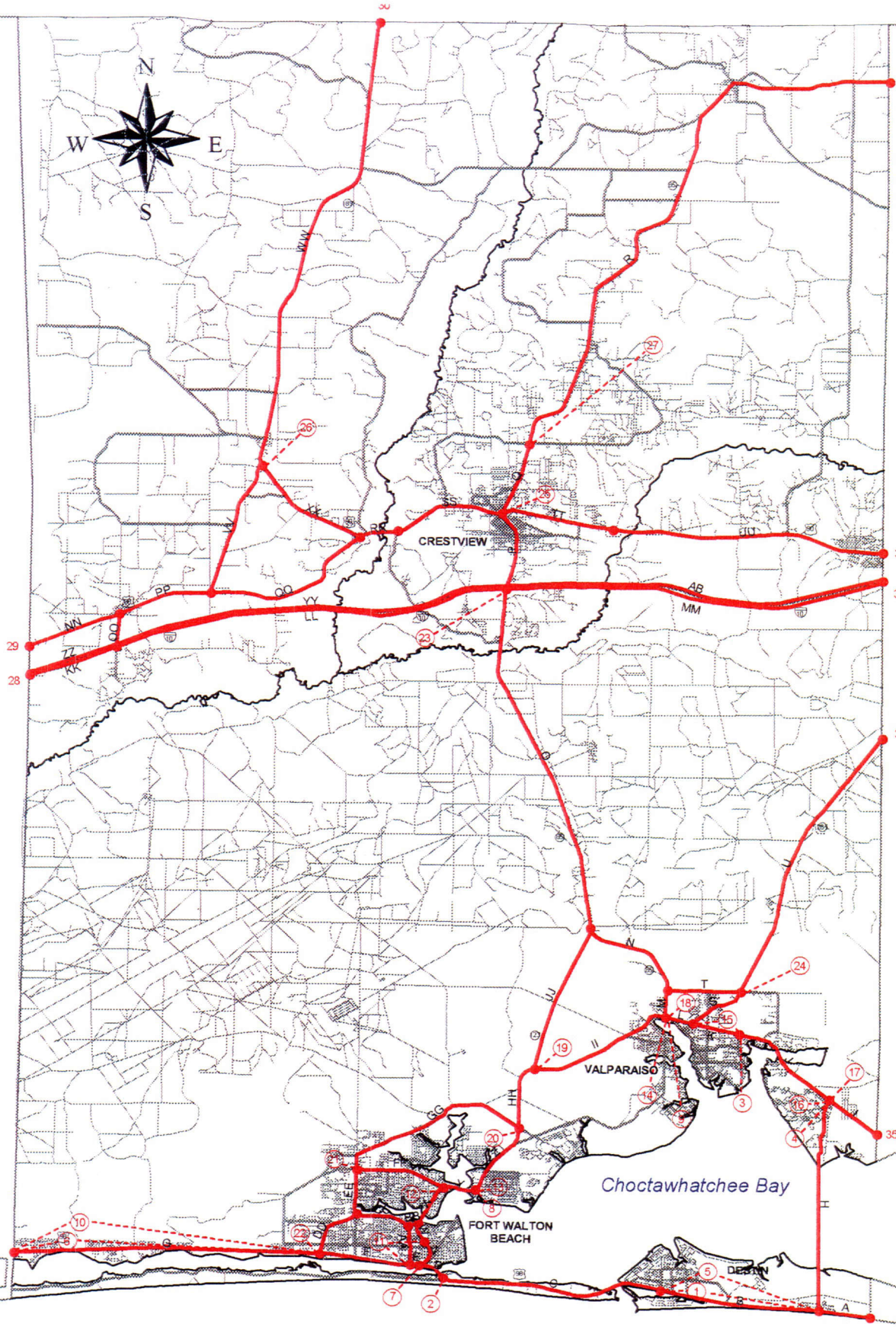
Plate 6-6



Santa Rosa County Evacuation Route Network

- Evacuation Zone Representation
- Node
- County Exiting Point / External Zone
- Network Link with Identifier
- Roadway

Plate 6-7



7 Evacuation Zone Representation

Node

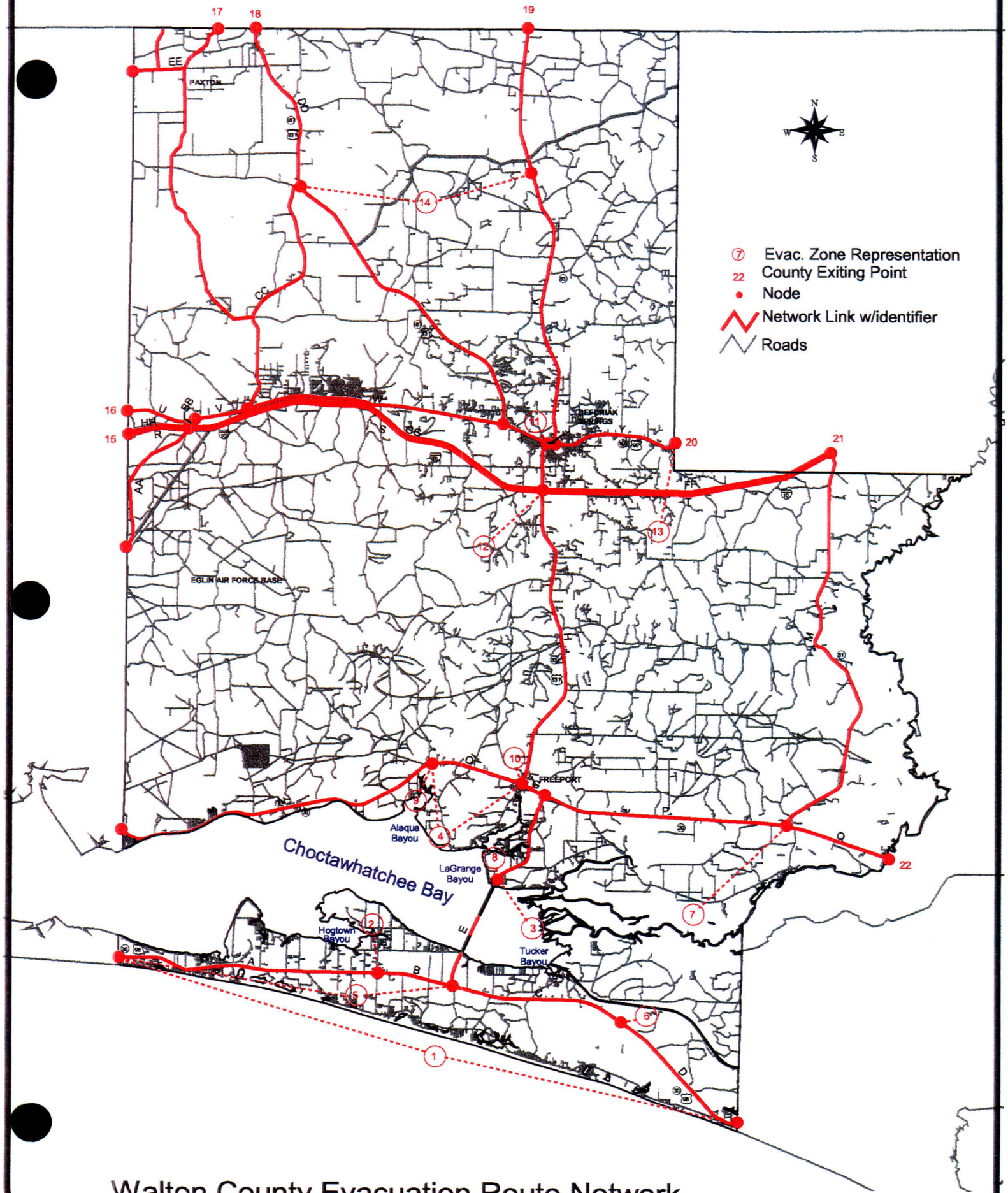
22 County Exiting Point / External Zone

Network Link with Identifier

Roadway

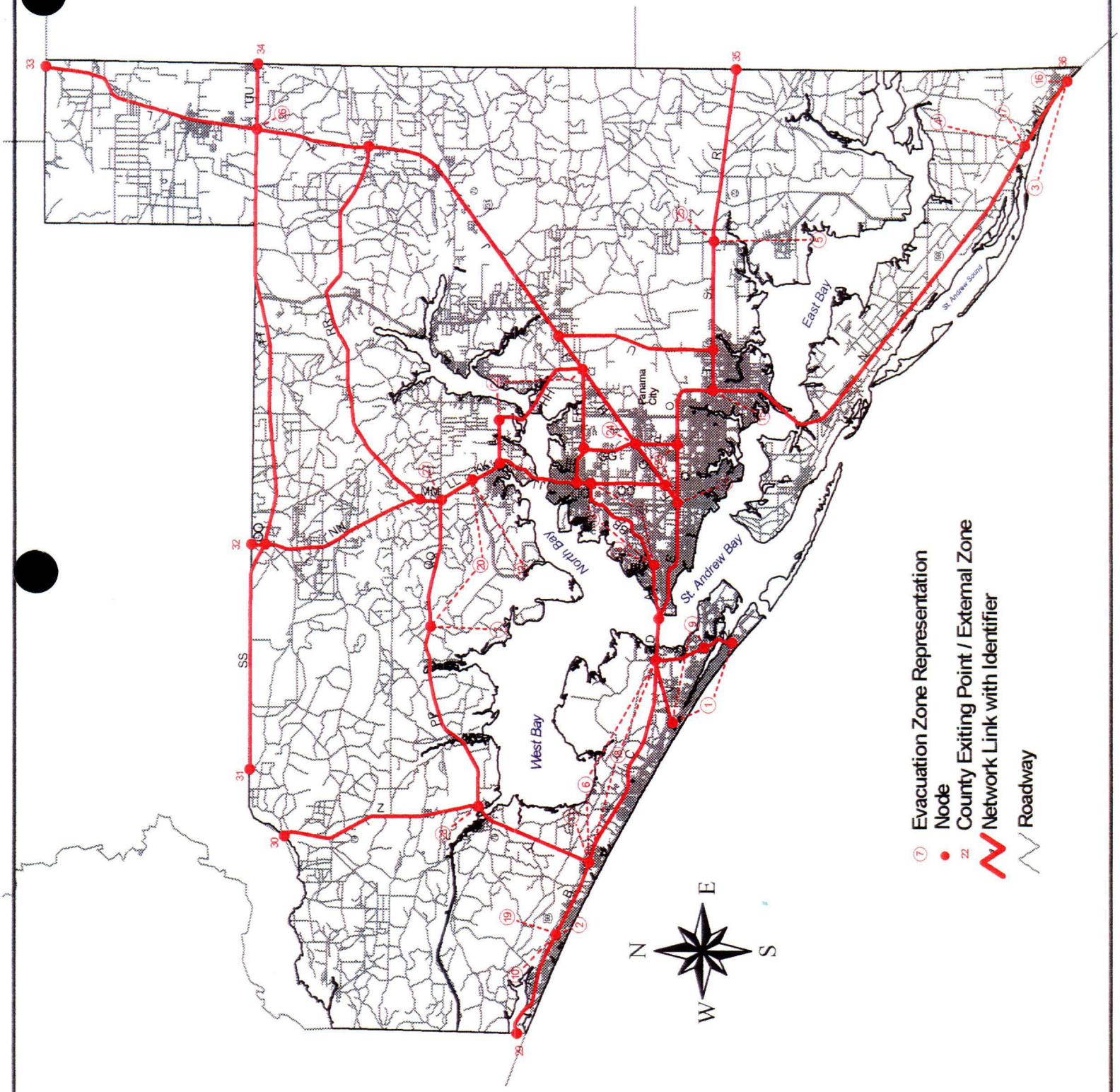
Okaloosa County Evacuation Route Network

Plate 6-8



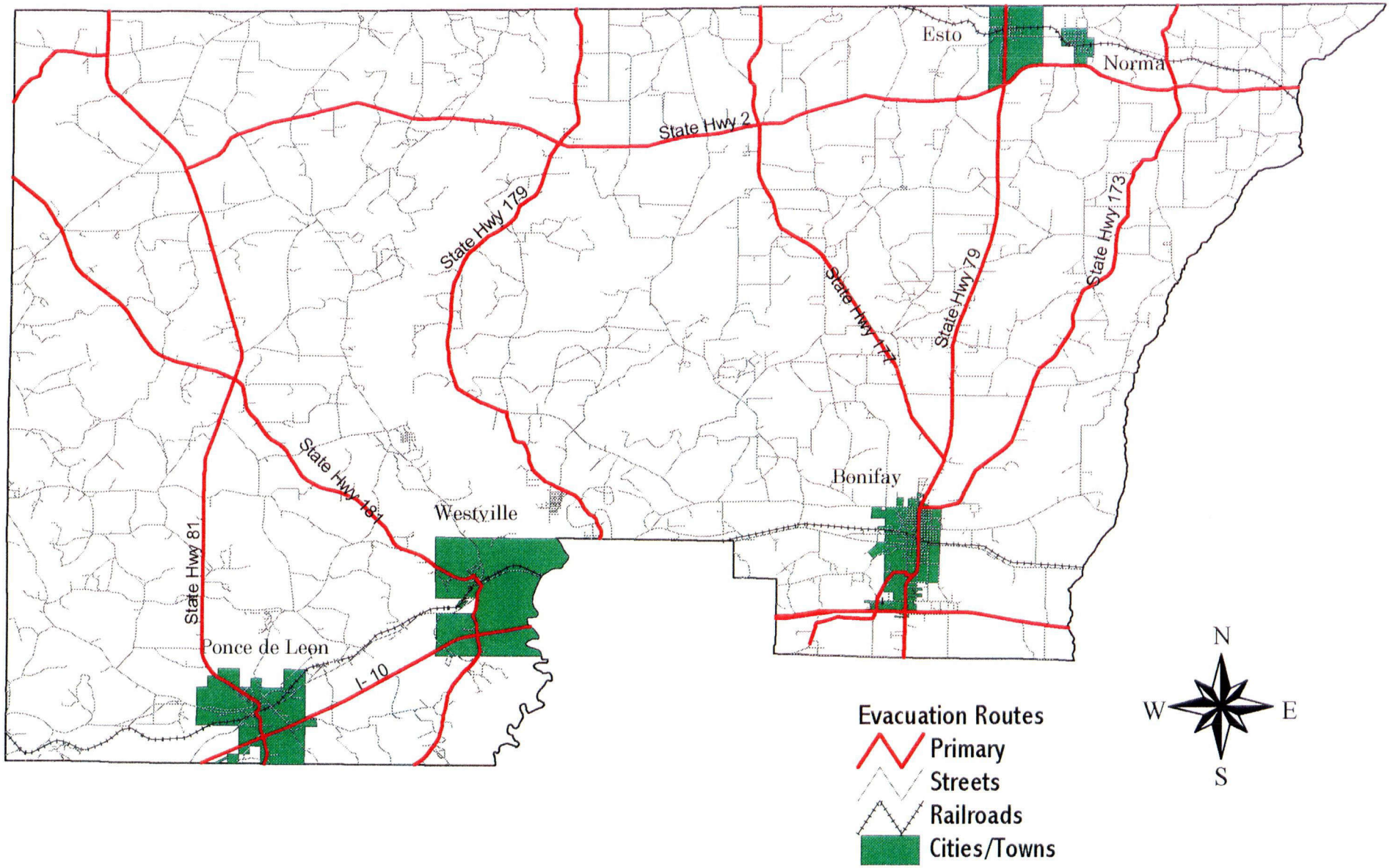
Walton County Evacuation Route Network

Plate 6-9



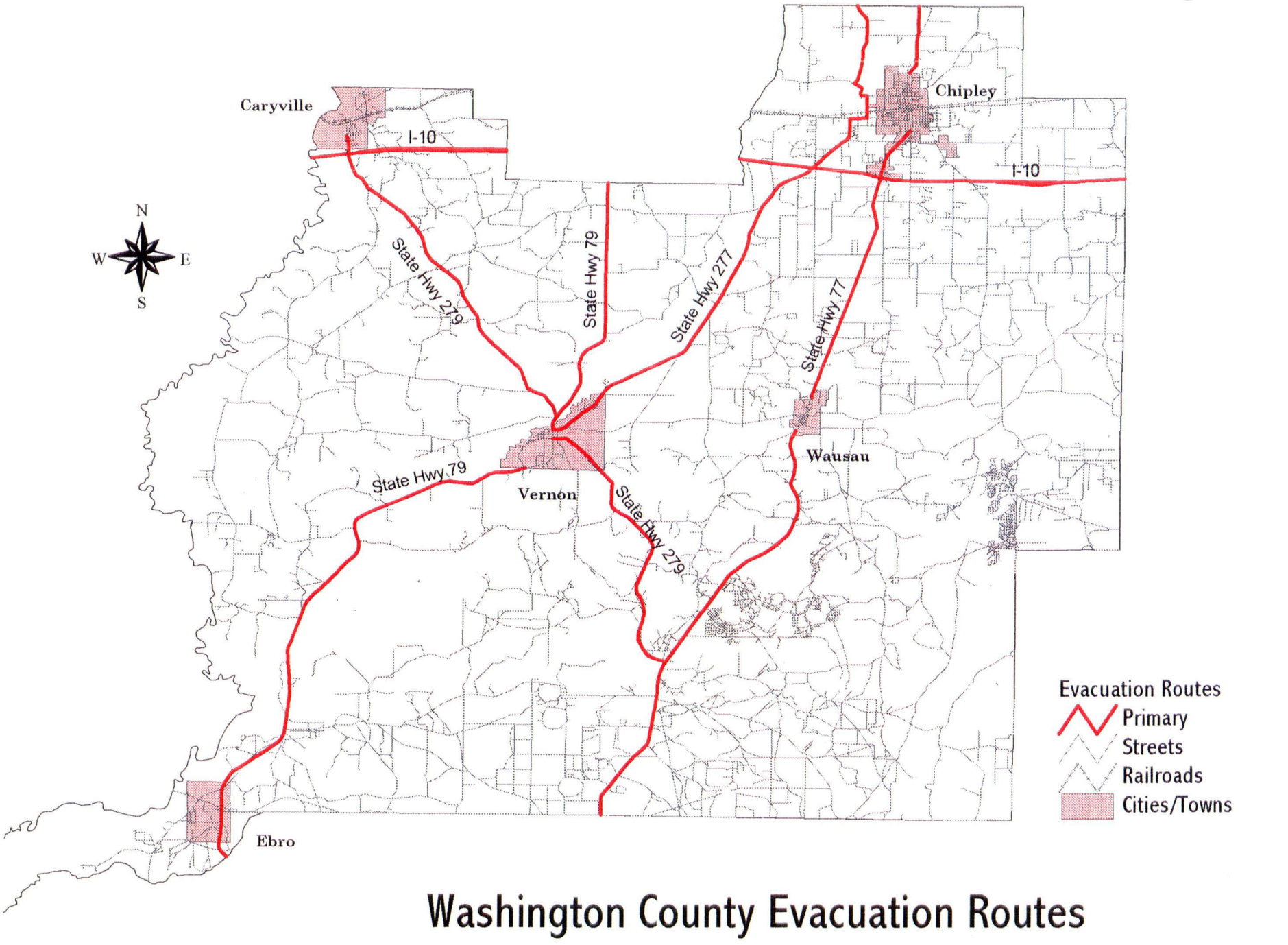
Bay County Evacuation Route Network

Plate 6-10



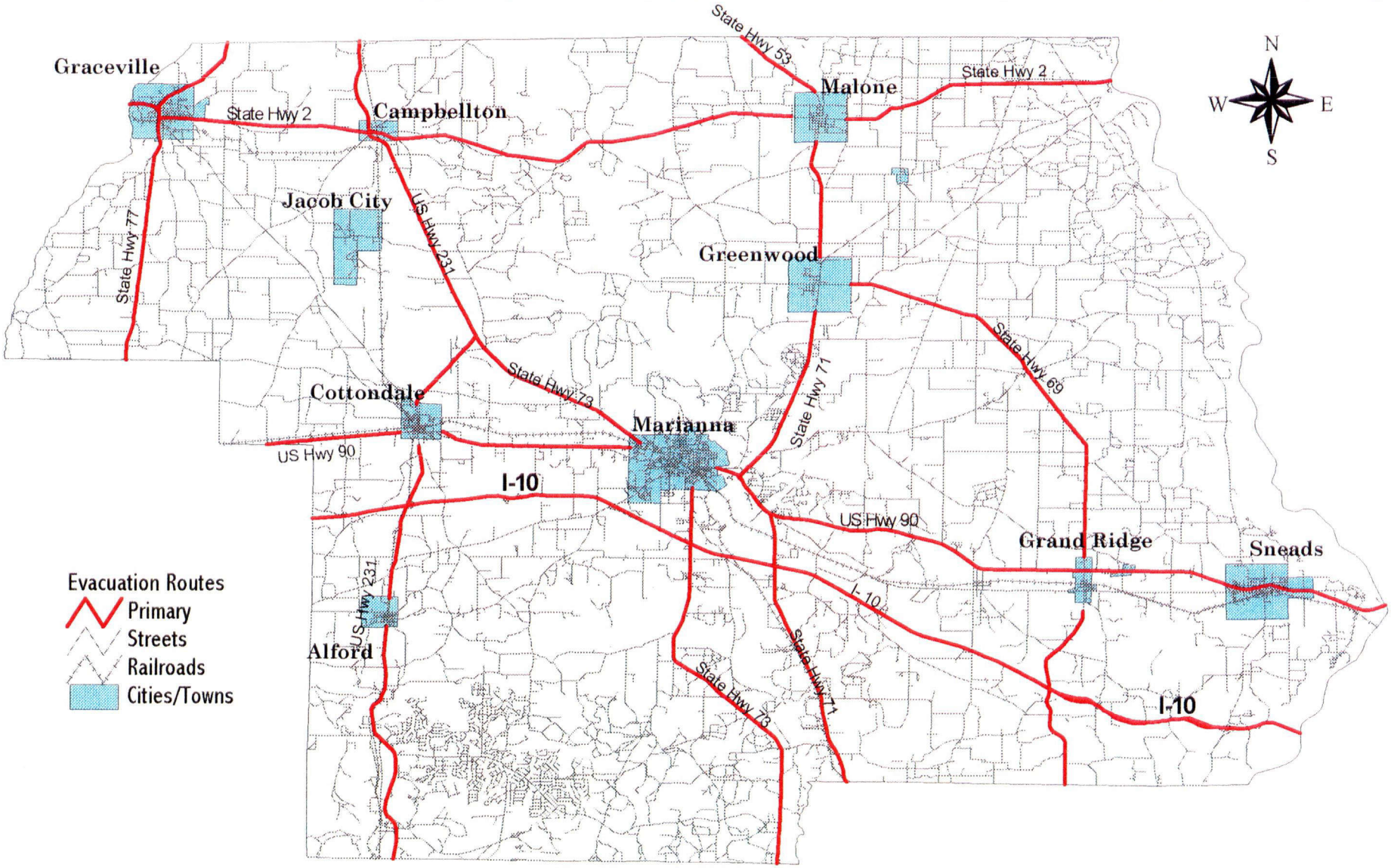
Holmes County Evacuation Routes

Plate 6-11



Washington County Evacuation Routes

Plate 6-12



Jackson County Evacuation Routes

20 0 20 Miles

Plate 6-13

DECISION ARCS

CHAPTER SEVEN - DECISION ARCS

PURPOSE

This chapter describes the Decision Arc Method, a hurricane evacuation planning and decision-making tool that uses clearance times in conjunction with National Hurricane Center advisories to help determine when and if evacuations should begin.

BACKGROUND

Hurricanes do not always approach land from a direction perpendicular to the coastline and frequently enter the mainland on an angular track. When a hurricane is still 24 hours off the coast an error of 10 degrees in predicting the hurricane track can easily mean a 100-mile difference in the point of landfall. The average error of landfall positions in a 12-hour forecast is roughly 50-60 miles.

When a hurricane approaches a coastline at an acute angle, an error in forecast landfall position will increase or decrease the distance to landfall, possibly resulting in a significant error in forecast time of landfall. The forward motion of hurricanes can also accelerate and decelerate, causing the time of landfall to be even more unpredictable. Since hurricane evacuation decision-making and mobilization have typically been dependent upon forecast landfall position and time of landfall, a method was needed that would help compensate for forecast errors by relating evacuation operations to hurricane position.

It is recommended that hurricane vulnerable jurisdictions investigate the various hurricane evacuation decision-making computer programs in use today. These programs usually incorporate hurricane evacuation study data, including some form of the Decision Arc Method presented in this chapter. Computer assistance can be very useful in speeding needed calculations and displaying important information and relationships. Even if a computer program is used, emergency management officials should be familiar with the concepts presented in this chapter. This will promote confidence in the software and ensure that decision-making can proceed despite power outages or computer failure.

DECISION ARC EQUIPMENT

The Decision Arc Method employs two separate but related components which, when used together, present a graphic depiction of the hurricane situation. A specialized hurricane tracking chart called the Decision Arc Map, is teamed with a transparent two-dimensional hurricane graphic called the STORM, to describe the approaching hurricane and its relation to the area considering evacuation.

a. Decision Arc Map

In order to properly evaluate the last reported position and forecast track of an approaching hurricane, a special hurricane tracking chart has been developed for the study area. Superimposed on an ordinary tracking chart is a series of concentric arcs centered on the southernmost boundary of the study area and spaced at 20-nautical-mile intervals. These arcs are labeled alphabetically and in nautical miles measured from their center. Plate 7-1 through 7-5 included at the end of this Chapter are small-scale examples of Decision Arc Maps for each county in the study area.

b. Storm Tool

The Special Tool for Observing Range and Motion (STORM) is used as a two-dimensional depiction of an approaching hurricane. It is a transparent disk with concentric circles spaced at 20-nautical-mile intervals, their center representing the hurricane eye. These circles form a scale used to note the radii of 34-knot (Gale force) winds reported by the National Hurricane Center in the Marine Advisory. Plate 7-6 included at the end of this Chapter is a small-scale example of the STORM tool.

c. National Hurricane Center Tropical Cyclone Advisory

Marine advisories on tropical storms are normally issued by the National Hurricane Center every 6 hours: 0500EDT, 1100EDT, 1700EDT, and 2300EDT. At times, supplementary intermediate advisories are also issued. These advisories contain information on present and forecast position, intensity, size, and movement that is used in the Decision Arc Method.

DECISION ARC CONCEPT

A hurricane evacuation should be completed prior to the arrival of sustained 34-knot (Gale force) winds or the onset of storm surge inundation, whichever occurs first. In the Apalachee Bay Region, the limiting factor for hurricane evacuation is primarily the arrival of sustained 34-knot winds.

The clearance time is the time required to clear the roadways of all evacuating vehicles. It therefore determines the minimum time period, in hours prior to the arrival of sustained 34-knot winds, necessary for a safe evacuation. Clearance times are based on three variables: (1) the Saffir/Simpson hurricane category, (2) the expected evacuee response rate, and (3) the tourist occupancy situation (where applicable).

Decision Arcs are clearance times converted to distance by accounting for the forward speed of the hurricane. To translate a clearance time into nautical miles (a Decision Arc distance) for use with the Decision Arc Map, a simple calculation of multiplying the clearance time by the forward speed of the hurricane in knots is necessary. This calculation yields the distance in nautical miles that the 34-knot wind field will move while the evacuation is underway.

a. Should Evacuation be Recommended

Probability values shown in the National Hurricane Center's (NHC) Probability Advisory describe in percentages the chance that the center of a storm will pass within 65 miles of the listed locations. The maximum probability the NHC uses for predicting a direct hit varies with the length of time before landfall. Table 7-1 shows these maximums. The total probability value for your location, shown on the right side of the Marine Advisory probabilities table, should be compared to other locations and to the maximums shown in table 7-1. This will indicate the relative vulnerability of your location as compared with adjacent locations and with the maximum possible probability.

Table 7-1 Maximum Probability Values by Forecast Period

Forecast period Hours	72	60	48	42	36	30	24	18	12
Maximum probability%	10	11	13	16	20	27	35	45	60

b. When Evacuation Should Begin

As a hurricane approaches, the Decision Arc Method requires officials to make an evacuation decision prior to the time at which the radius of sustained 34-knot winds touches the appropriate Decision Arc (the Decision Point). For example, with a clearance time of 15 hours, and a hurricane forward speed of 10 knots, the evacuation should be initiated before the sustained 34-knot winds get within 150 nautical miles (15 hours x 10 knots = 150 nautical miles)of the area being evacuated. This would correspond to Arc "H" on the decision arc map. For convenience, a Decision Arc Table (Table 7-2) has been developed that converts an array of clearance times and forward speeds to respective Decision Arcs. Once the sustained 34-knot winds move across the Decision Arc, there may not be sufficient time to safely evacuate the vulnerable population.

Table 7-2 Decision Arc Table

Estimated Clearance Time	Forecast hurricane forward speed (knots)						
	5	10	15	20	25	30	35
4	A	B	C	D	E	F	G
5	A	C	D	E	G	H	I
6	A	C	E	F	H	I	K
7	B	D	F	G	I	K	M
8	B	D	F	H	J	L	N
9	B	E	G	I	L	N	P
10	B	E	H	J	M	O	R
11	C	F	I	K	N	Q	T
12	C	F	I	L	O	R	U
13	C	G	J	M	Q	T	W
14	C	G	K	N	R	U	Y
15	D	H	L	O	S	W	AA
16	D	H	L	P	T	X	BB
17	D	I	M	Q	V	Z	DD
18	D	I	N	R	W	AA	FF
19	E	J	O	S	X	CC	HH
20	E	J	O	T	Y	DD	II
21	E	K	P	U	AA	FF	KK
22	E	K	Q	V	BB	GG	MM
23	F	L	R	W	CC	II	OO
24	F	L	R	X	DD	JJ	PP

DECISION ARC PROCEDURE

The following procedure has been developed to assist emergency managers determine, **WHEN** an evacuation decision must be made and **IF** you should initiate an evacuation. The National Hurricane Center Tropical Cyclone Advisory is used in this decision-making process. All notes and cautions shown in this procedure should be heeded as appropriate.

There are four basic "tools" you will need in your evacuation decision procedure:

(1) Decision Arc Map (Plates 7-1 through 7-5)
(2) Decision Arc table (Table 7-2)
(3) transparent STORM disk (Plate 7-6)
(4) the NHC Tropical Cyclone Advisory.

STEPS:

1. From the NHC Tropical Cyclone Advisory, plot the last reported position of the hurricane eye on the Decision Arc Map. Note position with date/time. ZULU time (Greenwich mean time) used in the advisory should be converted to eastern daylight time by subtracting four (4) hours. Plot and note the five forecast positions of the hurricane given in the advisory (i.e., 12, 24, 36, 48, 72 hr).

2. From the Tropical Cyclone Advisory, note the maximum radius of 34-knot winds (observed or forecast), the maximum sustained wind speed (observed or forecast), and the current forward speed. Plot the maximum radius of 34-knot winds onto the STORM disk. See note a. for information on nautical miles/knots.

3. Determine the <u>forecast</u> forward speed of the hurricane in knots. The forecast speed of the hurricane can be determined for each forecast position by dividing the distance between each position by the time interval between each position. Compare these forecast forward speeds to the current forward speed noted in previous advisories. A forecast speed greater than the current or previous forward speed indicates that the hurricane is expected to accelerate, which reduces the time available to the decision-maker.

4. Using the maximum sustained wind speed, determine the category of the approaching hurricane based on the Saffir/Simpson Hurricane Scale. **NOTE:** Because of potential forecast and SLOSH model inaccuracies, it may be wise to add one category to the forecast landfall intensity.

5. From the clearance time tables in Chapter 6, select the pertinent clearance time. Using that clearance time and the appropriate forecast forward speed of the storm select the appropriate Decision Arc from the Decision Arc Table (Table 7-2). Mark this arc on the Decision Arc Map.

6. Using the center of the STORM disk as the hurricane eye, locate the STORM on the Decision Arc Map at the last reported hurricane position. Determine if the radius of 34-knot winds falls within the selected Decision Arc (the point at which the radius of 34-knot winds crosses into the selected Decision Arc). If so, available traffic control measures should be implemented and public advisories issued in order to ensure a rapid public response and completion of the evacuation prior to the arrival of sustained 34-knot winds (or no evacuation advisory is issued). See note b. for additional evacuation timing information.

7. Move the STORM to the first forecast position. Determine if the radius of 34-knot winds has passed the Decision Point. If so, the Decision Point will be reached prior to the hurricane eye reaching the first forecast position.

8. If the radius of 34-knot winds has not crossed the decision arc you can estimate the hours remaining before a decision must be made by dividing the number of nautical miles between the current radius of 34-knot winds and the Decision Point by the forward speed used for the Decision Arc table. Determine if the next NHC Tropical Cyclone Advisory will be received prior to the Decision Point.

9. Compare probabilities shown in the Tropical Cyclone Advisory to determine where an evacuation is likely to take place (see note c.). Determine how an evacuation of your jurisdiction would affect the readiness of others and when they should be notified of your evacuation. Check inundation maps to determine where flooding may occur and evacuation zone maps for zones that should prepare to evacuate.

10. At the Decision Point, evacuation decision-makers should compare the latest probabilities for their location with those for surrounding areas and the maximums shown in table 7-1. In addition to that forecast track information, they should also consider the storm's intensity and the potential inundation.

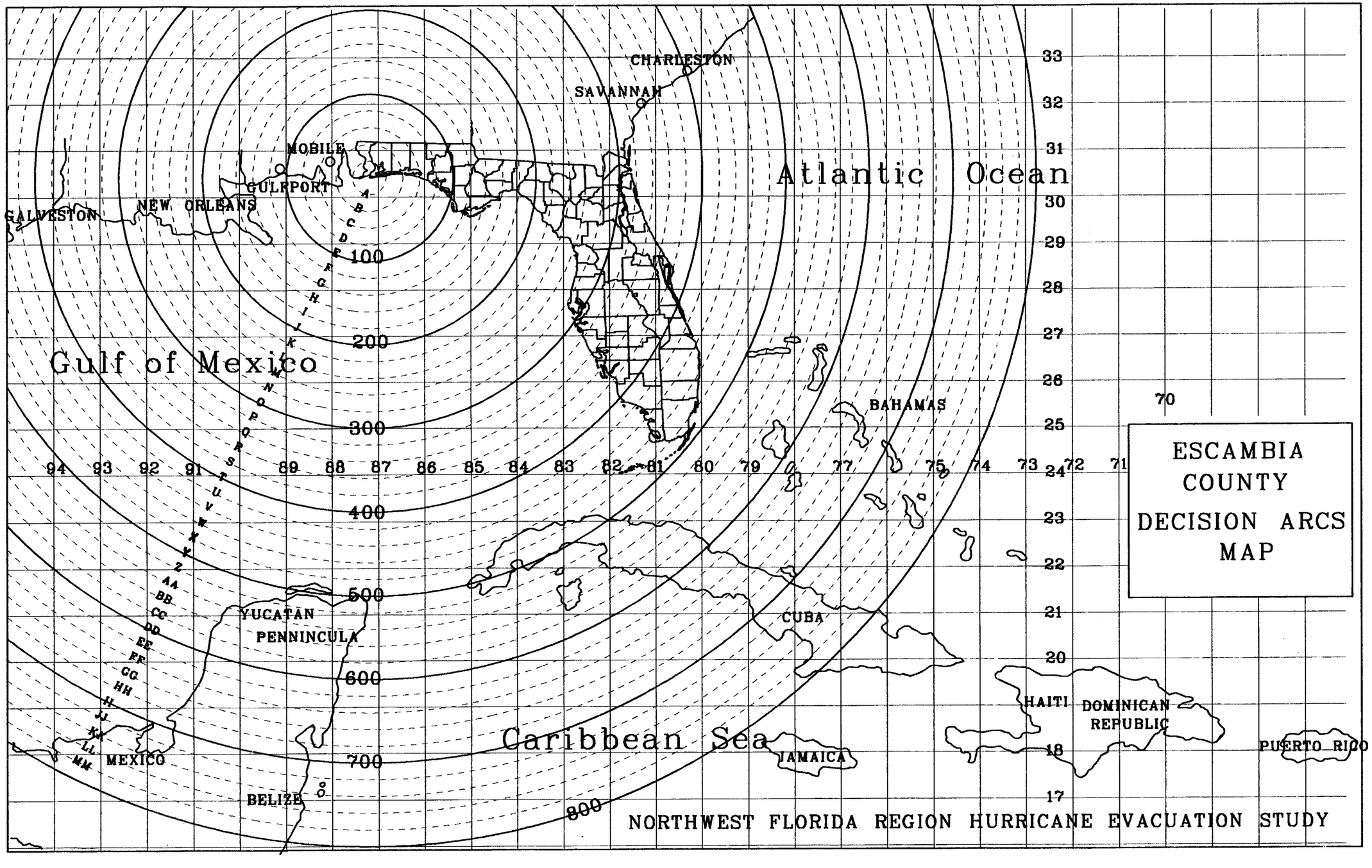
11. Steps 1 through 10 should be repeated after each NHC advisory until an evacuation decision is made or the hurricane threat has passed.

NOTES

a. Because information given in the Tropical Cyclone Advisory is in nautical miles and knots, the scale of the Decision Arc Maps and STORM is nautical miles. When utilizing hurricane information from sources other than the Marine Advisory, care should be taken to ensure that distances are given in or converted to nautical miles and speeds to knots. Statute miles can be converted to nautical miles by dividing the statute miles value by 1.15. Similarly, miles per hour can be converted to knots by dividing the miles per hour value by 1.15.

b. In the Decision Arc Method, there is no time specifically allocated for evacuation decision-making or mobilizing support personnel. Hurricane readiness operations should progress so that, if evacuation becomes necessary, preparations will be complete and the recommendation to evacuate can be given at the Decision Point.

c. Probability values shown in the Marine Advisory describe in percentages the chance that the center of a storm will pass within 65 miles of the listed locations. To check the relative probability for your particular area, the total probability value for the closest location, shown on the right side of the probability table in the advisory, should be compared to other locations. A comparison should also be made with the possible maximums for the applicable forecast period shown in the table of maximum probability values included in these instructions. These comparisons will show the relative vulnerability of your location to adjacent locations and to the maximum possible probability.


ESCAMBIA COUNTY DECISION ARCS MAP
Atlantic Ocean
Gulf of Mexico
Caribbean Sea
CHARLESTON
SAVANNAH
MOBILE
GULFPORT
NEW ORLEANS
GALVESTON
BAHAMAS
CUBA
HAITI
DOMINICAN REPUBLIC
JAMAICA
PUERTO RICO
YUCATAN PENNINCULA
MEXICO
BELIZE
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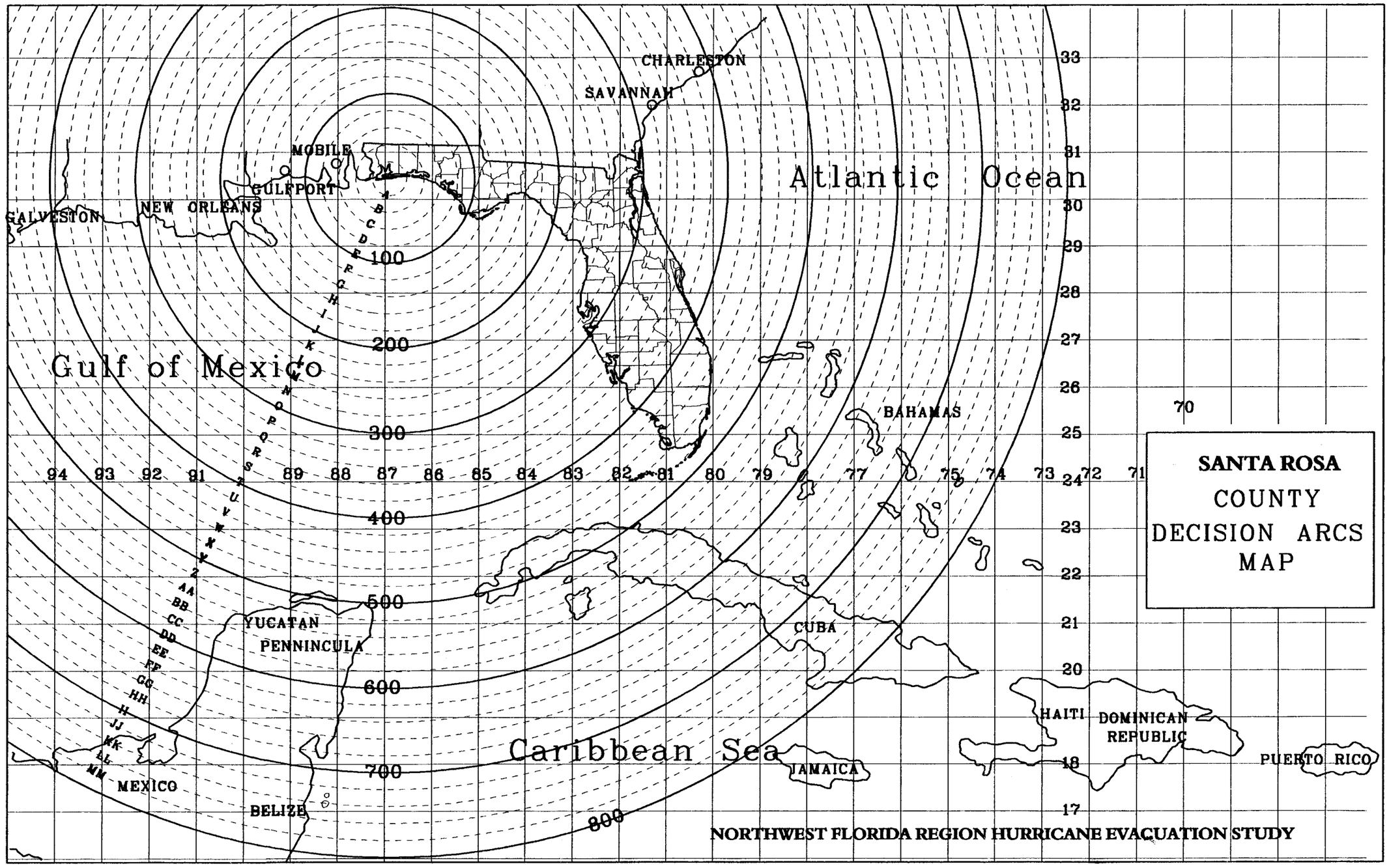
NORTHWEST FLORIDA REGION HURRICANE EVACUATION STUDY

PLATE 7-1


SANTA ROSA
COUNTY
DECISION ARCS
MAP
Atlantic Ocean
Gulf of Mexico
Caribbean Sea
CHARLESTON
SAVANNAH
MOBILE
GULFPORT
NEW ORLEANS
GALVESTON
BAHAMAS
CUBA
HAITI
DOMINICAN REPUBLIC
JAMAICA
PUERTO RICO
YUCATAN PENNINCULA
MEXICO
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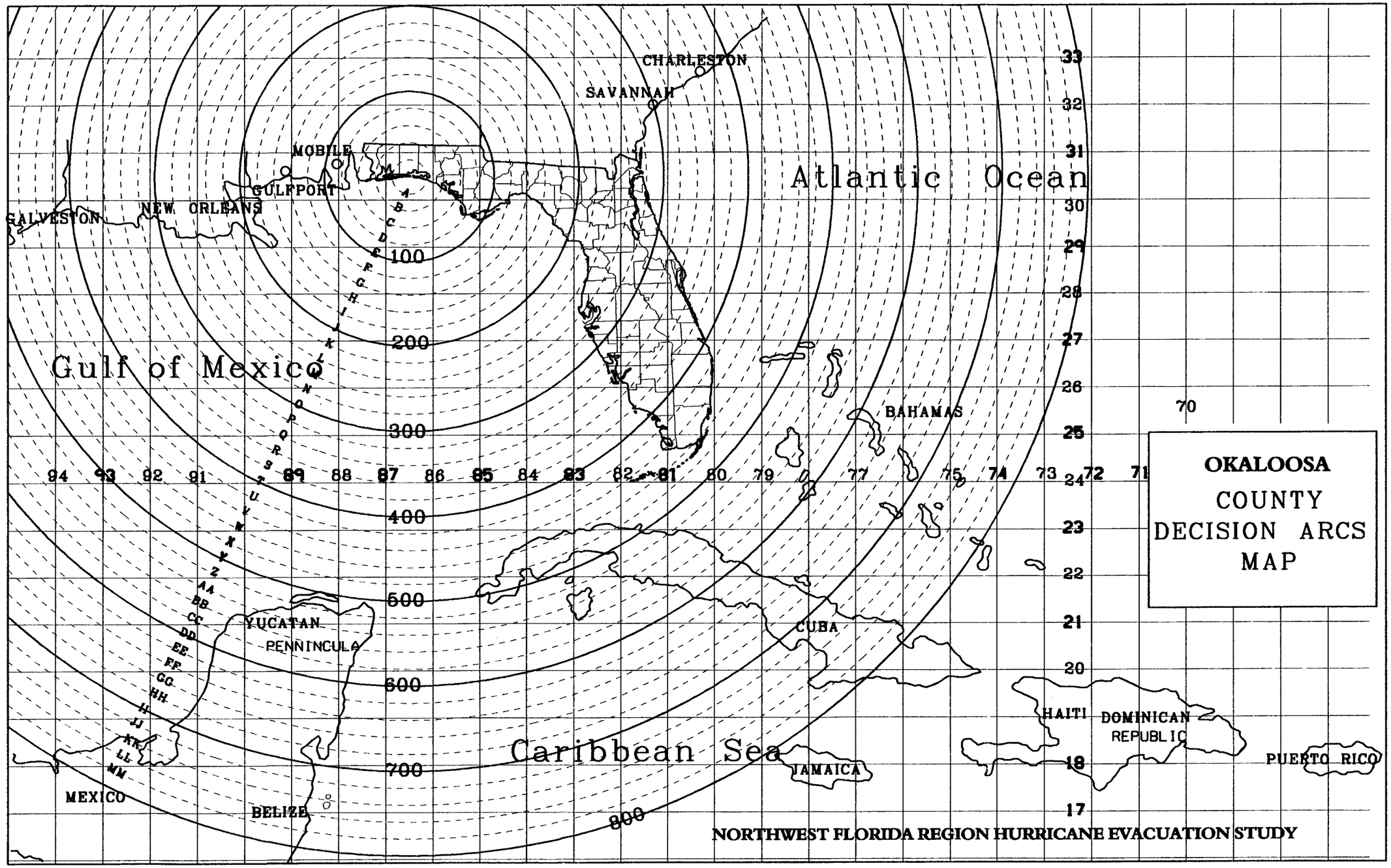
94 93 92 91 89 88 87 86 85 84 83 82 81 80 79 77 75 74 73 72 71 70
33 32 31 30 29 28 27 26 25 24 23 22 21 20 18 17
NORTHWEST FLORIDA REGION HURRICANE EVACUATION STUDY

PLATE 7-2


OKALOOSA
COUNTY
DECISION ARCS
MAP
Atlantic Ocean
Gulf of Mexico
Caribbean Sea
CHARLESTON
SAVANNAH
MOBILE
GULFPORT
NEW ORLEANS
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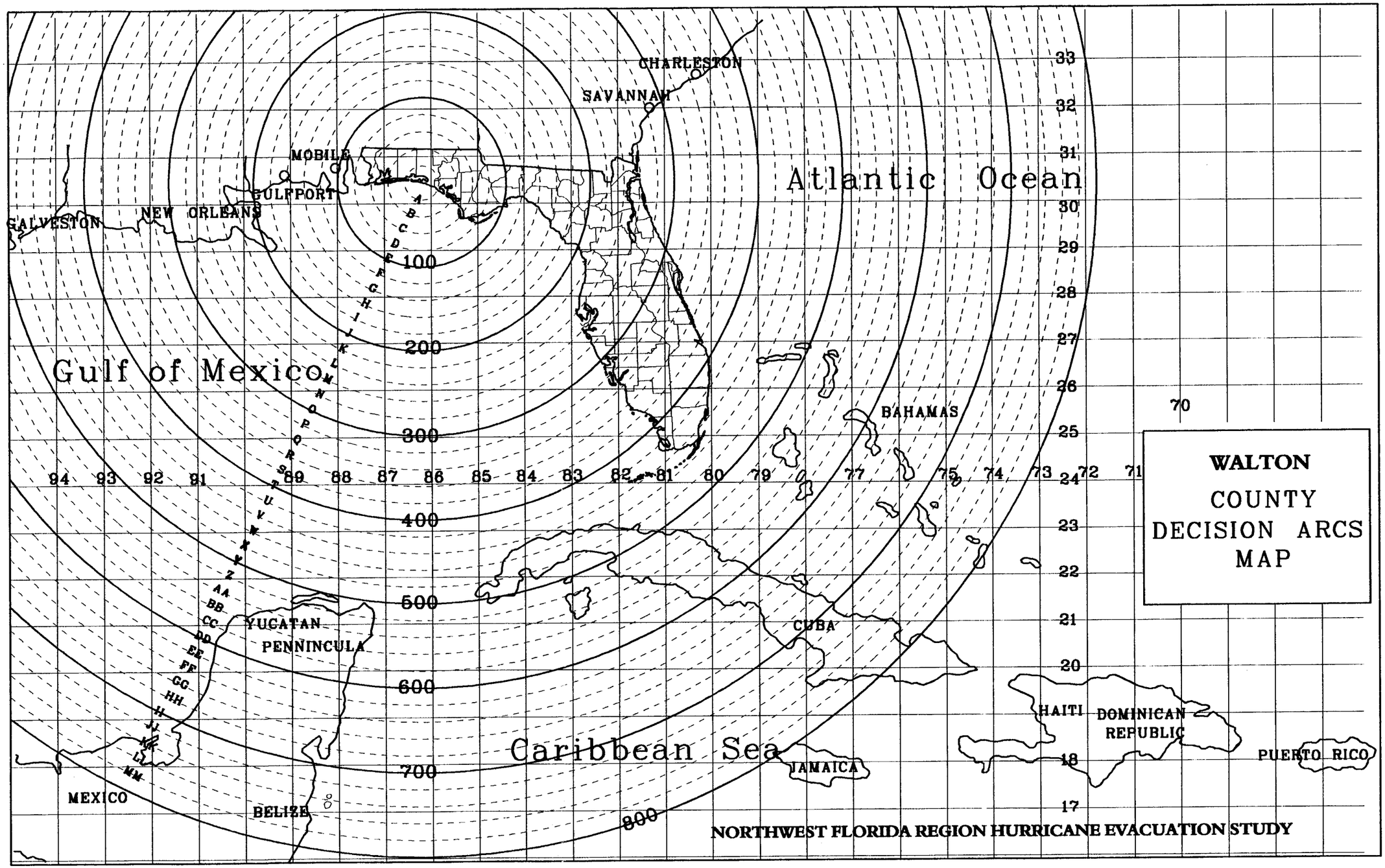
NORTHWEST FLORIDA REGION HURRICANE EVACUATION STUDY

PLATE 7-3


WALTON
COUNTY
DECISION ARCS
MAP
Atlantic Ocean
Gulf of Mexico
Caribbean Sea
CHARLESTON
SAVANNAH
MOBILE
GULFPORT
NEW ORLEANS
GALVESTON
BAHAMAS
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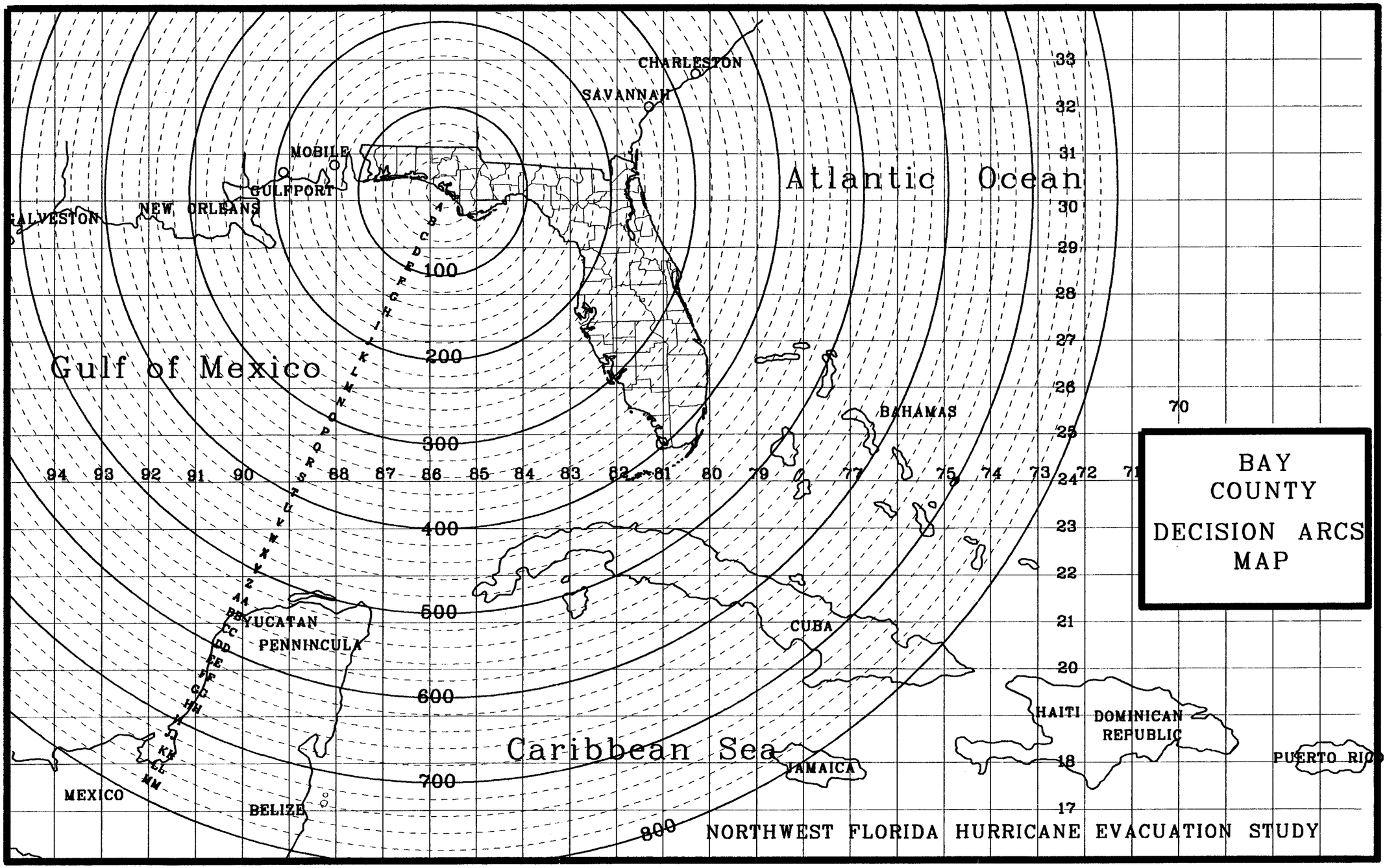
NORTHWEST FLORIDA REGION HURRICANE EVACUATION STUDY

PLATE 7-4


BAY COUNTY
DECISION ARCS MAP
Atlantic Ocean
Gulf of Mexico
Caribbean Sea
CHARLESTON
SAVANNAH
MOBILE
GULFPORT
NEW ORLEANS
GALVESTON
BAHAMAS
CUBA
HAITI
DOMINICAN REPUBLIC
JAMAICA
PUERTO RICO
YUCATAN PENNINCULA
MEXICO
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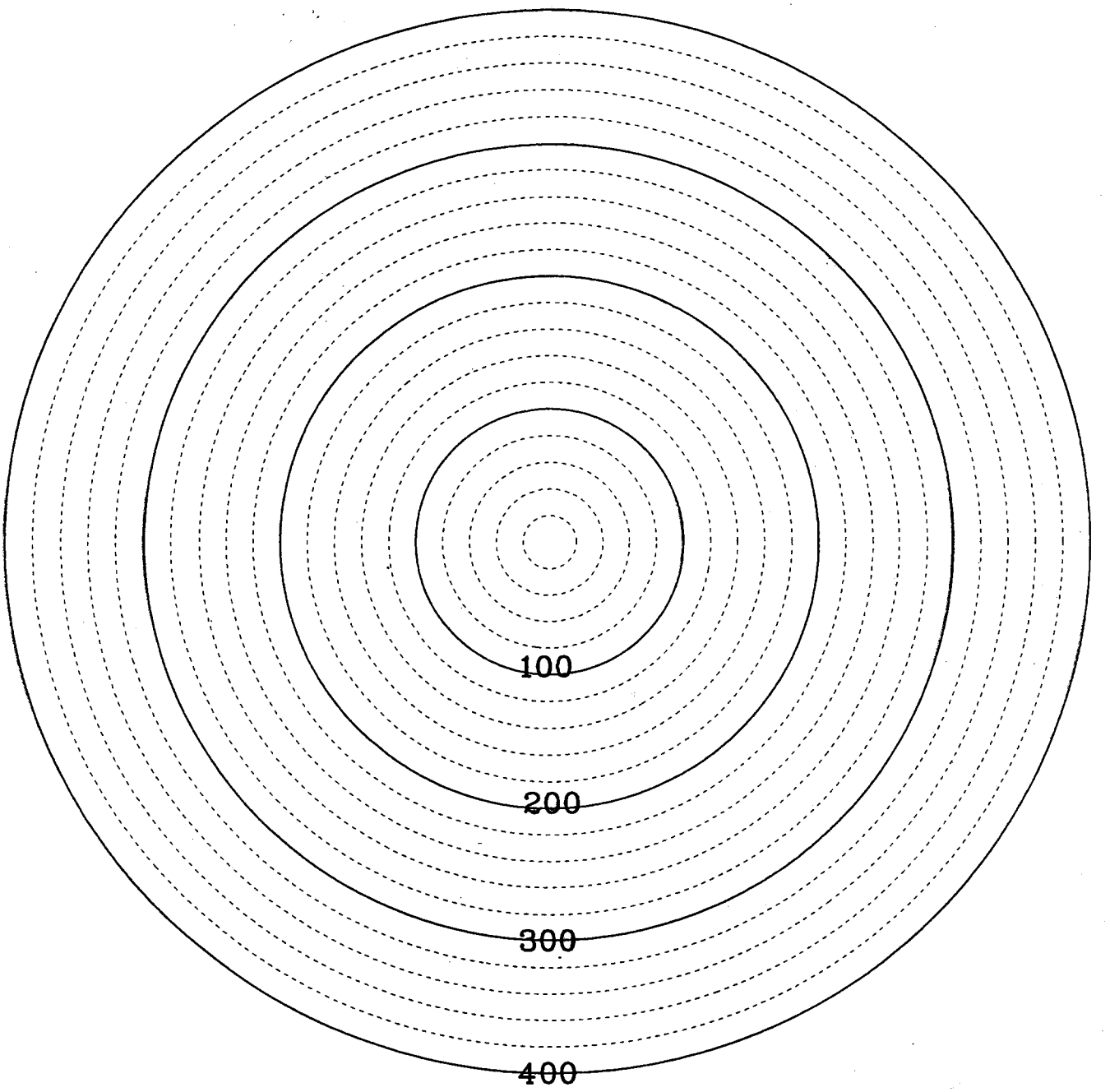
NORTHWEST FLORIDA HURRICANE EVACUATION STUDY

PLATE 7-5



STORM TOOL

DECISION ARCS

Mobile District

U.S. Army Corps of Engineers

Plate 7-6