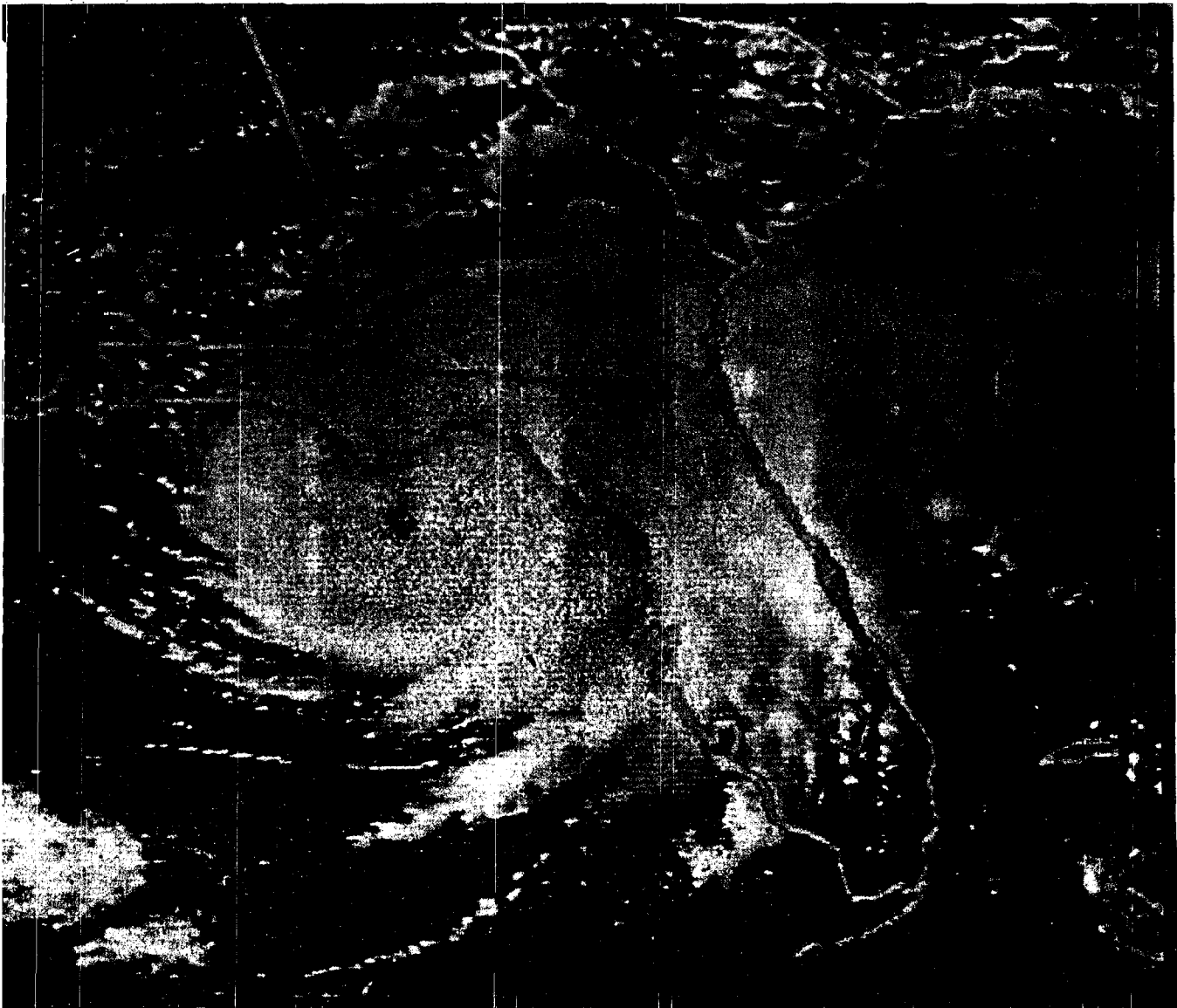


Withlacoochee Region **HURRICANE LOSS STUDY**

COASTAL ZONE
FORMATION CENTER

Prepared By
WITHLACOOCHEE REGIONAL PLANNING COUNCIL



Task 2.8
211-167

WITHLACOCHEE REGION
HURRICANE LOSS STUDY

FINAL REPORT

NOVEMBER, 1987

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ABSTRACT

The Withlacoochee Region Hurricane Loss Study makes quantitative estimates of the dollar losses that would result to property in the event of simulated hurricane scenarios. Three hurricane tracks representing hurricanes hitting Cedar Key, Crystal River and Pine Island, in Levy, Citrus and Hernando Counties respectively, are simulated at all five hurricane categories. The SPLASH II program is used to provide estimates of windspeeds and surge heights at the coast. Based on wind decreases and surge decline inland estimates of the percent of buildings that would be destroyed are made using information collected by insurance companies, surveyors and engineers. The potential percentage loss, or vulnerability coefficient is used in conjunction with the appraised value of property to calculate dollar losses.

Property appraisal data is divided into twelve land use types; vacant, single-family residential, multi-family residential, mobile home, commercial, service industrial, agricultural, government and institutional, health care, public transportation and utilities. An inventory of the number of structures and a cumulative total of acreages in each land use category is produced.

Dollar losses are also calculated for agricultural production, temporary employment and service disruption in the region. Using annual incomes for field and vegetable crops, citrus, poultry and dairy products potential losses to the annual yields in the subsequent year are calculated. Employment losses and service disruption are calculated using the number of days of inoperation that would result to service, commercial and manufacturing establishments as in the event of a hurricane strike. The values of the following public and private non-profit facilities are also documented; water supply facilities, wastewater treatment facilities, electrical assets, communication systems, transportation networks, educational establishments, non-profit utility facilities and emergency, medical, and custodial care facilities. This data coupled with hazardous materials storage locations and types provides essential information for post disaster recovery efforts.

The probability of hurricane occurrence analysis estimates return periods for each category of hurricanes, based on historical occurrence of storms in the region. Annualized losses are calculated to show the potential loss resulting from each hurricane category divided by the years between events. The data produced in the Withlacoochee Region Hurricane Loss Study provides essential information on which to base hazard mitigation and contingency policies in the future.

TABLE OF CONTENTS

	<u>PAGE</u>
Acknowledgments	i
Abstract	iii
Table of Contents	iv
List of Tables	vi
List of Figures	vix
List of Maps	x
List of Appendices	xii
 Chapter 1: INTRODUCTION OF HURRICANE LOSS ANALYSIS. . .	 1
Introduction	1
The Hurricane Loss Study	3
Hurricane Tracks	3
Special Program to List Amplitudes of Surges from Hurricanes (SPLASH II)	5
Loss Zone Designation	6
Land Use and Structural Inventories	6
Values of Projected Loss	7
Annualized Loss	17
 Chapter 2: PROBABILITY ANALYSIS OF HURRICANE OCCURRENCE IN THE WITHLACOOCHEE REGION . .	 18
Region Analysis	19
Analysis by County	21
 Chapter 3: AGRICULTURAL LOSS INVENTORY.	 32
Agricultural Practices	32
Value of Agricultural Loss Methodology	33
Timber Losses	34
 Chapter 4: HAZARDOUS MATERIALS INVENTORY.	 55
Hazardous Materials	55
Hazardous Waste	56
 Chapter 5: INVENTORY OF PUBLIC FACILITIES	 70
Public Water Supply Facilities and Public Wastewater Treatment Facilities	70
Electrical Facilities	71
Communication Facilities	71
Transportation Facilities	71
Healthcare Facilities	72

TABLE OF CONTENTS CONTINUED

	<u>PAGE</u>
Chapter 6: INVENTORY OF PRIVATE NON-PROFIT FACILITIES	109
Private Non-profit Educational Facilities	109
Non-Profit Utility Facilities	109
Fire and Ambulance Emergency Facilities	109
Medical Facilities	110
Non-Profit Custodial Care Facilities	110
Chapter 7: THE EFFECTS OF HURRICANE LOSSES UPON EMPLOYMENT AND ECONOMIC DEVELOPMENT. . .	129
The Economy of the Withlacoochee Region	129
Employment Trends	129
Economic Development	131
Assessing Employment Loss	131
Annualized Loss	134
Bibliography	136

LIST OF TABLES

TABLE	PAGE
1. Population of the Counties, County Seats and Coastal Municipalities in the Withlacoochee Region, 1980 - 1986.	2
2. Percent Damage Caused by Varied Heights of Veolocity Surge.	14
3. The Saffir Simpson Hurricane Classification.	18
4. Tropical Cyclones Passing Within 120 Nautical Miles of Crystal River, 1886 - 1985.	20
5. Hurricane Return Periods for the Withlacoochee Region.	22
6. Storm Occurrence by Month in the Withlacoochee Region, 1886 - 1985.	24
7. Storm Occurence by Heading in the Withlacoochee Region, 1886 - 1985.	24
8. Tropical Cyclones Passing Within 100 Nautical Miles of Hernando County, 1886 - 1985.	26
9. Tropical Cyclones Passing Within 100 Nautical Miles of Cedar Key (Levy County), 1886 - 1985.	28
10. Tropical Cyclones Passing Within 100 Nautical Miles of Crystal River (Citrus County), 1886 - 1985.	30
11. Farmland in Counties Within the Withlacoochee Region, 1984.	36
12. Value of Vegetable Crops in the Withlacoochee Region, 1984 - 1985.	37
13. Field Crop Value in the Withlacoochee Region, 1985.	38
14. Harvet Dates for Begetables and Field Crops Grown in the Withlacoochee Region.	39
15. Citrus Acreage by Type of Fruit in the Counties of the Withlacoochee Region, 1985.	40
16. Dairy and Livestock Values in the Withlacoochee Region.	41
17. Market Value of Agricultural Products Sold in the Withlacoochee Region.	42

LIST OF TABLES CONTINUED

TABLE	PAGE
18. Milk Production in the Withlacoochee Region.	43
19. Fish and Shellfish Landings and Value For Counties in the Withlacoochee Region (1983).	44
20. Potential Losses of the Poultry Industry Within the Withlacoochee Region.	45
21. Farms by Standard Industrial Classification in the Withlacoochee Region.	46
22. Agricultural Loss Associated with Different Hurricane Categories - Citrus County.	47
23. Agricultural Loss Associated with Different Hurricane Categories - Hernando County.	48
24. Agricultural Loss Associated with Different Hurricane Categories - Levy County.	49
25. Agricultural Loss Associated with Different Hurricane Categories - Marion County.	50
26. Agricultural Loss Associated with Different Hurricane Categories - Sumter County.	52
27. Forest Products of Counties Within the Withlacoochee Region (1986).	53
28. Timber Losses Associated with Different Hurricane Categories - Withlacoochee Region.	54
29. Large Quantity Hazardous Waste Generators in the Withlacoochee Region.	57
30. Public Potable Water Supply Facilities in the Withlacoochee Region.	74
31. Public Wastewater Treatment Facilities in the Withlacoochee Region.	82
32. Electrical Facilities in the Withlacoochee Region.	93
33. Communication Facilities in the Withlacoochee Region.	100
34. Telephone Facilities in the Withlacoochee Region.	101
35. Estimated Values of Airports within the Withlacoochee Region.	102

LIST OF TABLES CONTINUED

TABLE	PAGE
36. Losses to Coastal Roads in the Withlacoochee Region.	103
37. Nursing Homes in the Withlacoochee Region.	106
38. Psychiatric Hospitals in the Withlacoochee Region.	107
39. Private Non-Profit Educational Facilities in the Withlacoochee Region.	111
40. Values of Non-Profit Utilities in the Withlacoochee Region.	114
41. Fire Department in Citrus County.	115
42. Fire Department in Hernando County.	118
43. Fire Department in Levy County.	120
44. Fire Department in Marion County.	122
45. Fire Department in Sumter County.	125
46. Hospitals in the Withlacoochee Region.	127
47. Private Non-profit Custodial Care Facilities in the Withlacoochee Region.	128
48. Employment By Industry in the Withlacoochee Region 1980 - 1995.	130
49. The Total Employee Income Loss Per Business, Per Day of Inoperation.	132

LIST OF FIGURES

<u>FIGURE</u>	<u>PAGE</u>
1. Hypothetical Hurricane Tracks Passing through the Withlacoochee Region.	4
2. Damage Caused by Storm Surge to Single-Family Residential, Multi-Family Residential, Mobile Home, and Commercial Land Uses.	15
3. Damage Caused by Wind to Single-Family Residential, Multi-Family Residential, Mobile Home, Commercial, Industrial and All Other Land Uses.	16
4. Historical Storm Occurrence by Heading and Date in the Withlacoochee Region, 1886 - 1985.	25
5. The Relationship Between Unemployment Days/Service Disruption and Vulnerability Coefficients.	135

LIST OF MAPS

<u>MAP</u>	<u>PAGE</u>
1. Hurricane Loss Zones - Citrus County.	8
2. Hurricane Loss Zones - Hernando County.	9
3. Hurricane Loss Zones - Levy County.	10
4. Hurricane Loss Zones - Marion County.	11
5. Hurricane Loss Zones - Sumter County.	12
6. Large Quantity Hazardous Waste Generators - Citrus County.	64
7. Large Quantity Hazardous Waste Generators - Hernando County.	65
8. Large Quantity Hazardous Waste Generators - Levy County.	66
9. Large Quantity Hazardous Waste Generators - Marion County.	67
10. Large Quantity Hazardous Waste Generators - City of Ocala.	68
11. Large Quantity Hazardous Waste Generators - Sumter County.	69
12. Public Potable Water Supply and Wastewater Treatment Facilities - Citrus County.	88
13. Public Potable Water Supply and Wastewater Treatment Facilities - Hernando County.	89
14. Public Potable Water Supply and Wastewater Treatment Facilities - Levy County.	90
15. Public Potable Water Supply and Wastewater Treatment Facilities - Marion County.	91
16. Public Potable Water Supply and Wastewater Treatment Facilities - Sumter County.	92
17. Hospitals and Healthcare Facilities in the Withlacoochee Region.	108
18. Fire and Ambulance Emergency Facilities - Citrus County	117
19. Fire and Ambulance Emergency Facilities - Hernando County.	119

LIST OF MAPS CONTINUED

<u>MAP</u>	<u>PAGE</u>
20. Fire and Ambulance Emergency Facilities - Levy County.	121
21. Fire and Ambulance Emergency Facilities - Marion County.	124
22. Fire and Ambulance Emergency Facilities - Sumter County.	126

LIST OF APPENDICES

<u>APPENDIX</u>		<u>PAGE</u>
A.	Inventory of Structures by Loss Zone.	140
B.	Land Use Inventory by Loss Zone for Each County in the Withlacoochee Region.	145
C.	Summary of Losses by Hurricane Category and Loss Zone for Each County in the Withlacoochee Region.	150
D.	Annualized Losses by Loss Zone for Each County in the Withlacoochee Region.	171
E.	Values of Agricultural Products by Loss Zone for Each County in the Withlacoochee Region.	192
F.	Hazardous Materials Inventory for the Withlacoochee Region.	198
G.	Employment and Income Statistics for the Withlacoochee Region.	199
H.	Temporary Employment Losses by Hurricane Category and Loss Zone for Each County in the Withlacoochee Region.	204
I.	Annualized Employment and Service Disruption Losses by Loss Zone for Each County in the Withlacoochee Region.	214

CHAPTER 1
INTRODUCTION TO HURRICANE LOSS ANALYSES

INTRODUCTION TO HURRICANE LOSS ANALYSES

INTRODUCTION

The Withlacoochee region consists of three coastal counties and two inland counties. The largest municipality in the region is Ocala, situated inland in Marion County. The approximately 100 miles of coastline are not densely populated. Cedar Key, Yankeetown and Inglis in Levy County, Crystal River in Citrus County and Weeki Wachee in Hernando County are the only incorporated coastal municipalities in surge-prone areas. The region as a whole, however, has experienced rapid population growth, especially in Marion, Citrus and Hernando Counties. According to the U.S. Census Bureau the Marion County - City of Ocala Metropolitan Statistical Area experienced the second highest rate of growth in the country from 1980 to 1986. The growth rate was estimated at 60 percent between 1980 and 1986. Similarly Citrus County's population is increasing rapidly, and the Citrus County Department of Development Services (1987) estimates a 62.3 percent increase in population from 1980 to 1987. Hernando County's population increase of almost 30,000 people over the same time period represents a 66 percent change (Table 1). The unincorporated Spring Hill area in Southwest Hernando County is the most densely populated coastal area of the region. Levy and Sumter Counties, while growing more slowly, have had population increases of over 15 percent.

Rapid growth presents emergency managers with unique problems. The numbers immigrating produce a population with little or no experience of hurricane threats. This inexperience, combined with the long time lapses between each hurricane event, is a concern of emergency managers throughout Florida. In the Withlacoochee region the last storm to hit directly was Hurricane Gladys in 1968 in Hernando County. The last evacuation was carried out when Hurricane Elena stalled off Cedar Key in 1985. Cedar Key sustained considerable wind and surge damage and high winds were recorded throughout the region. Levy County and the City of Cedar Key sustained almost a half million dollars in losses to county and city property and roads alone, (Levy County Civil Defense, 1987) which is considerably less than the potential loss that would be received in the event of a direct hit to the County.

TABLE 1
POPULATION OF THE COUNTIES, COUNTY
SEATS AND COASTAL MUNICIPALITIES
IN THE WITHLACOOCHEE REGION, 1980 - 1986

Name	Population		Total Change	% Change
	1 1980	2 1986		
Citrus County	54,703	77,275	22,572	41%
Crystal River	2,778	3,562	784	28%
Inverness	4,095	5,183	1,088	27%
Hernando County	44,469	73,646	29,177	66%
Brooksville	5,582	7,109	1,527	27%
Weeki Wachee	8	8	0	0%
Levy County	19,870	23,205	3,335	17%
Bronson	853	952	99	12%
Cedar Key	700	870	170	24%
Inglis	1,173	1,547	374	32%
Yankeetown	600	634	34	6%
Marion County	122,488	166,606	44,118	36%
Ocala	37,170	42,298	5,128	14%
Sumter County	24,272	28,540	4,268	18%
Bushnell	983	1,354	371	38%
Withlacoochee Region	265,802	369,272	103,470	39%

1 - 1980 Census

2 - April 1, 1986 Estimate

Sources: Bureau of Economic and Business Research, University of
Florida. "Florida Estimates of Population, April 1, 1986.
February, 1987.
Withlacoochee Regional Planning Council, 1987.

THE HURRICANE LOSS STUDY

The Hurricane Loss Study makes estimations of losses for each of the five counties, for all five categories of hurricane. Dollar losses are estimated using hypothetical hurricane tracks moving across the region. The five counties are divided into loss zones, based upon the area's vulnerability to hurricane hazards. An inventory of structures and a land use inventory by loss zone are produced, using the same loss zones and land use types as the summary of losses. Estimates of potential dollar losses are also made for each hurricane category for agriculture endeavors by county. Loss of temporary employment and service disruption is estimated using commercial, service and manufacturing categories. The analysis of hurricane occurrence in the region enables estimations of hurricane return periods to be made for the region and for each of the coastal counties. Inventories of the facilities of particular importance to emergency managers include the location of all large quantity hazardous waste generators and hazardous material storage facilities in the five counties. The location and value of public facilities and private non-profit facilities are also provided. The Hurricane Loss Study provides technical information for use at the local, state and federal level. These technical analyses provide the background data to be used in the Hurricane Contingency plan for the Withlacoochee region.

HURRICANE TRACKS

The National Weather Service provided fifty-six hypothetical hurricane scenarios, produced by the Special Program to List Amplitudes of Surge from Hurricanes (SPLASH II) for the Withlacoochee Hurricane Evacuation Study (1982). Sixteen tracks were used in the evacuation study taking parallel, exiting and normal hurricane paths at different categories (Figure 1). The hurricane scenarios used in the hurricane loss study are three approaches normal to the coast at each category. Each of the normal tracks is approximately central to Levy, Citrus and Hernando Counties, striking at Cedar Key, Crystal River and Pine Island respectively. Each county received predicted surge and wind values for each hurricane category.

Normal hurricane approaches were chosen as representative of a worst case scenario, because normal hurricanes produce peak hurricane force winds and surge on the coast and inland until friction and distance from the energy source dissipate the hurricane forces. For the loss zone designation, however, wind and surge values from all sixteen tracks shown in Figure 1 are used to project surge inland using the inland routing methodology.

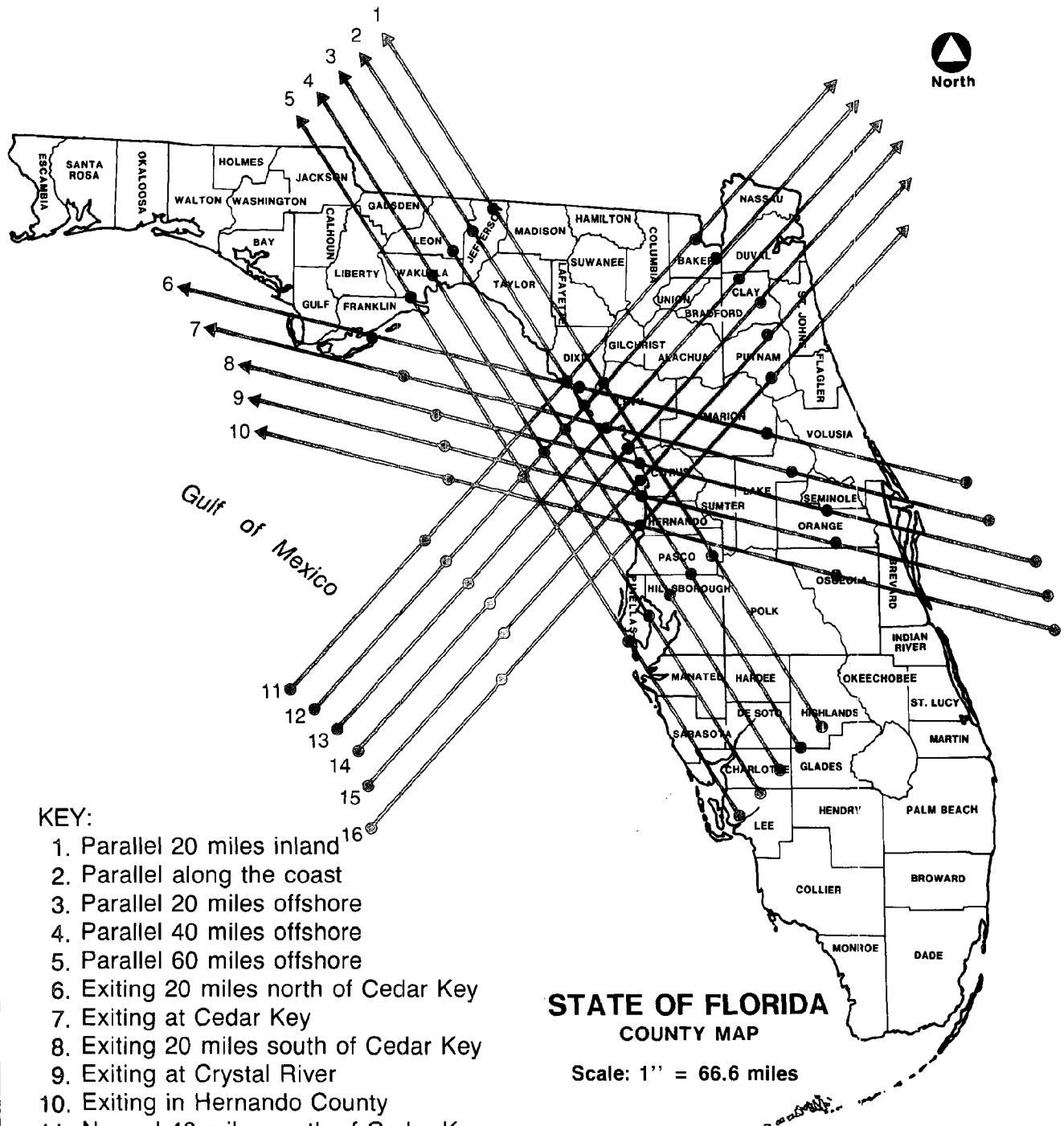
Fifteen coastal damage scenarios are therefore used, taking three hurricane tracks (Tracks 13, 15 and 16, Figure 1) at each of the five hurricane categories.

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FIGURE 1
Hypothetical Hurricane Tracks Passing
Through the Withlacoochee Region



SOURCE: "Withlacoochee Hurricane Evacuation Study."

1982. p. 15.

SPECIAL PROGRAM TO LIST AMPLITUDES OF SURGES FOR HURRICANES
(SPLASH II)

The SPLASH II program makes predictions for wind speeds and surge heights at the coast. However, many hurricane-related phenomena cannot be statistically modeled. Hurricanes are always a regional event, and the SPLASH II program makes estimates of wind and surge values away from the storm center. However, prediction of levels of hazards inland has to be carried out separately. Estimates of the decreases in surge height, wave action and wind strength inland must be made from the SPLASH II static coastal evaluation. It is also necessary that estimations be made for the astronomic tidal stage and wave set-up. The funneling effect of bays and estuaries and the effect of barrier islands and lagoons must be estimated based on the direction and speed of approach, where they occur. The Withlacoochee region does not have these types of coastal features.

Hurricane-related phenomena are not consistent. Therefore, SPLASH II predictions are based upon anticipated average events using past records of hazards. Storm systems of the same category may have diameters of different sizes; therefore, the length of coast affected will vary. Hurricane Anita, which hit the Mexican coast, in September 1977, was a compact category 3 hurricane with a small rotating cloud formation. In contrast, Hurricane Elena, also a category 3 storm, in September 1985, had squalls of thunderstorms that reached into South Carolina when the eye was off the coast of the Florida Panhandle. The size of the storm will also affect the time that hurricane force winds will reach the coast ahead of the eye. The strongest winds surround the eye of the storm, where warm, moist water updrafts. The size of the eye will therefore affect when the strongest winds will occur. Eye diameters have varied, and one of the largest recorded was 50 miles during Hurricane Frederic in 1979.

The SPLASH II program cannot predict the amounts and location of hurricane-related rainfall. Hurricanes are surrounded by squalls of thunderstorms which are most severe in the right forward quadrant. However, the amount of rainfall will depend upon many variables. Hurricanes have been categorized into two types; either "wet" and "dry". Wet hurricanes may not even produce rain at the coast. One of the most costly hurricanes recorded was Hurricane Agnes in 1972. The high values of damages were recorded not on the coast, as a result of wind and surge, but in inland states as a result of flooding caused by heavy rainfall. Similarly, phenomena such as tornados and hail are still unpredictable and so cannot be included in a statistical model like SPLASH II.

LOSS ZONE DESIGNATION

The SPLASH II model uses the bathymetry and oceanographic conditions of the region, combined with the atmospheric climatic conditions necessary, to predict maximum sustained winds and surge heights. Peak surge heights generated by the SPLASH II model were calculated for points along the coastline of the region. This produced a hurricane surge profile for the region's coastline. The regional surge profile was projected inland using the National Hurricane Center's inland routing methodology (Withlacoochee Hurricane Evacuation Study, 1982). The methodology assumes a decline in the level of surge to zero at 15 miles inland, incorporating decreases due to wind stress and obstructions. The surge is projected to the point of intersection with land elevation. The methodology was carried out for 20 transects in the three coastal counties using different categories of paralleling, exiting and normal hurricane scenerios. The distance traveled inland by the surge represents the extent of loss zones inland that are influenced by both surge and wind (Map 1 to 5).

Three coastal loss zones were designated for each coastal county representing zones of storm surge vulnerability by section (Withlacoochee Hurricane Evacuation Study - Technical Data Report, 1984). Since county tax roll data are presented by section in most cases, loss zone boundaries were by section. Inland loss zones were defined using projected values of wind decay based on distance inland. Inland loss zones were aligned parallel to the coast by township and range and continuous through the counties of the region to represent isotachs. Loss zones are one range wide for 30 miles inland. Loss zones two ranges in width (12 miles) are present in Sumter and Marion Counties. Maps 1 to 5 show the hurricane loss zone designations by county. The extent of surge inland in a worst case scenario (category 5) is shown and represents the inland boundary between the first three surge-prone zones and the fourth loss zone of coastal counties. Therefore, structures in loss zones 1, 2 or 3 in Levy, Citrus or Hernando Counties will be prone to both storm surge and hurricane force winds.

LAND USE AND STRUCTURAL INVENTORIES

Property appraisal data provided to the Florida Department of Revenue by county property appraisers were used to produce two inventories, a land use acreage inventory and an inventory of structures by loss zone. The ninety-nine land use classifications used by the Florida Department of Revenue were divided into twelve land use types. The inventory of structures and land use acreage inventory were divided by the twelve land uses and loss zone for each county. Residential land uses were divided into single-family residential, multi-family residential

and mobile home land use categories. Commercial, service and manufacturing industries were divided into separate categories so that the inventory of structures could be used in the calculation of temporary employment loss and service disruption (Chapter 7).

LAND USE CATEGORIES

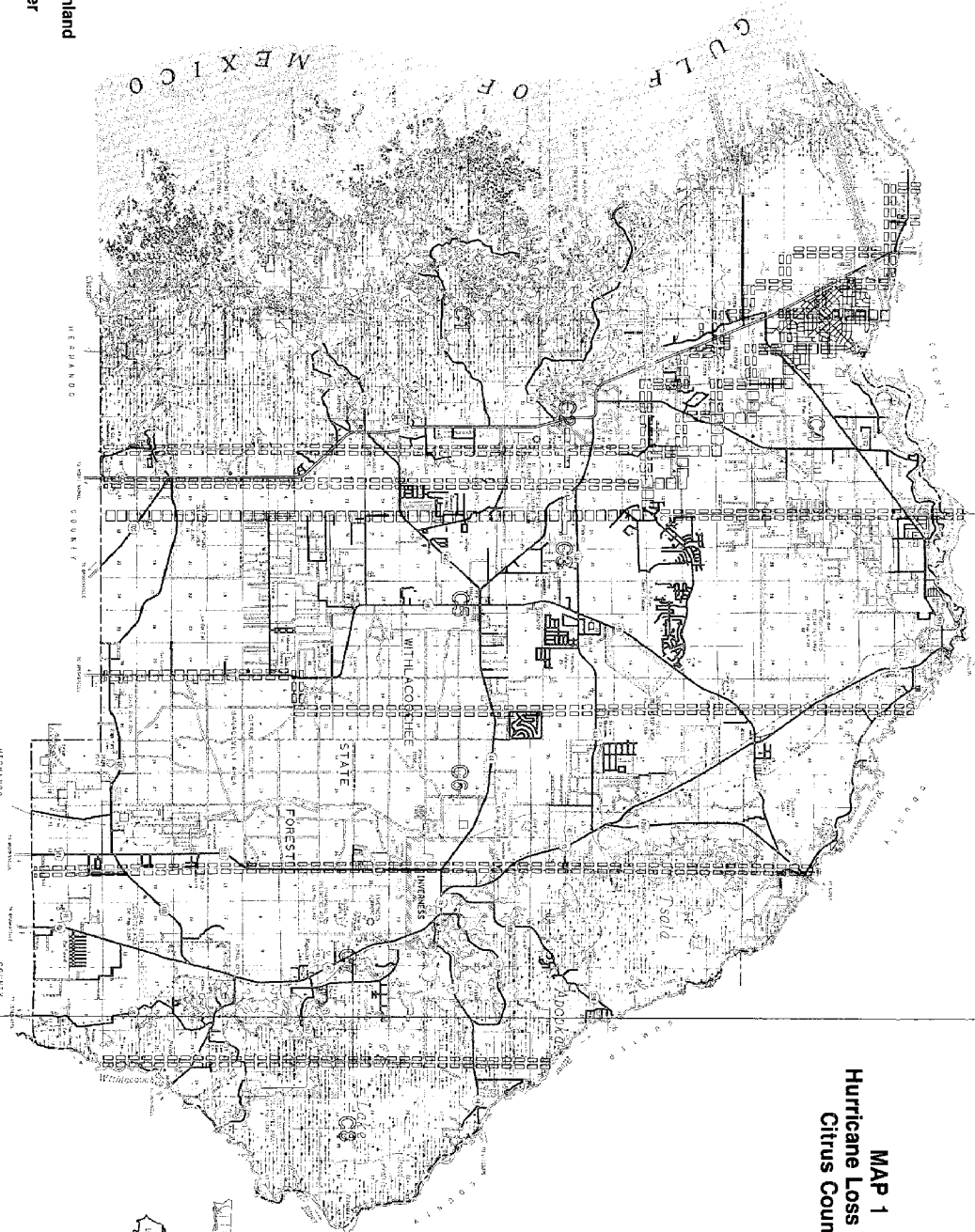
- Vacant
- Single-Family Residential
- Multi-Family Residential
- Mobile Home
- Commercial
- Service
- Manufacturing
- Agricultural
- Government/Institutional
- Health Care
- Public Transportation
- Utilities

The structural inventory (Appendix A) documents the number of structures located in each loss zone. Each parcel of land recorded on county property tax rolls was totalled for each loss zone, by county. Inaccuracy may occur where a single entry on the tax roll represents more than one structure, in the case of a multi-family land use, for example. Similarly, a structure may be associated with more than one parcel of land. The land use acreage inventory (Appendix B) documents the acreages associated with each land use category by loss zone for each county. Acreage values by lot are recorded in most cases on county tax rolls. Where acreage is not available, lot front and depth measurements enable acreage to be deduced.

VALUES OF PROJECTED LOSS

Using SPLASH II predictions for maximum sustained winds and surge heights, expected percent damage to structures in each loss zone was calculated. SPLASH II predicts the strength of one minute sustained winds. Peak wind gusts are the wind levels used in the estimation of percent damage to structures depending upon the land use. SPLASH II maximum sustained winds were converted to peak gusts using "roughness levels". Peak gust estimations will be higher than the value for maximum sustained winds, depending upon the surface over which the wind travels. There are different factors associated with the types of land use.

MAP 1 **Hurricane Loss Zones** **Citrus County**



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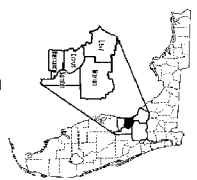
□ Extent of Surge Inland

61 Loss Zone Number

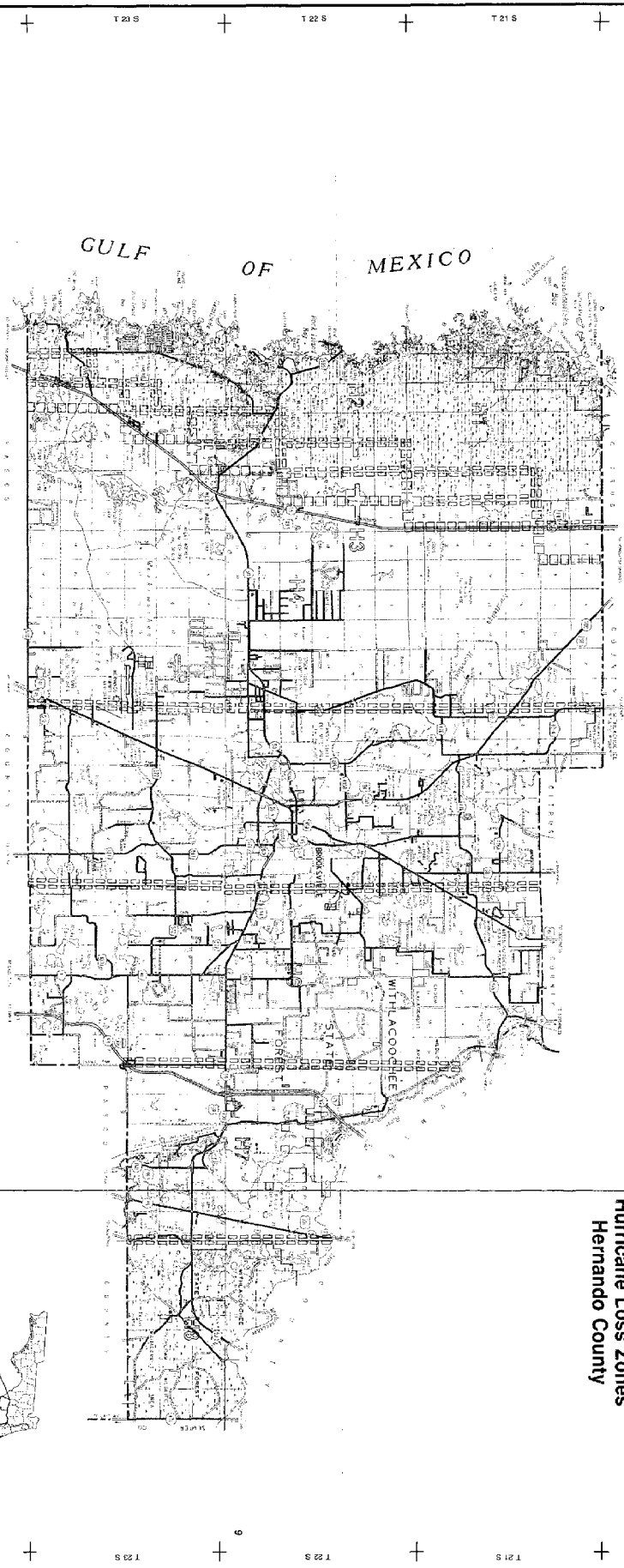
SOURCE: Withlacoochee Regional Planning Council, 1987.

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



CITRUS COUNTY
FLORIDA



MAP 2
Hurricane Loss Zones
Hernando County

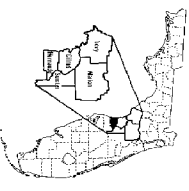


KEY:

-  Extent of Surge Inland
-  Loss Zone Number

SOURCE: Withlacoochee Regional Planning Council, 1987.
 Date map prepared by the
 Florida Department of Transportation
 Geometric Engineering Division
 Withlacoochee Regional Planning Council

HERNANDO COUNTY
FLORIDA



MAP 3 Hurricane Loss Zones Levy County

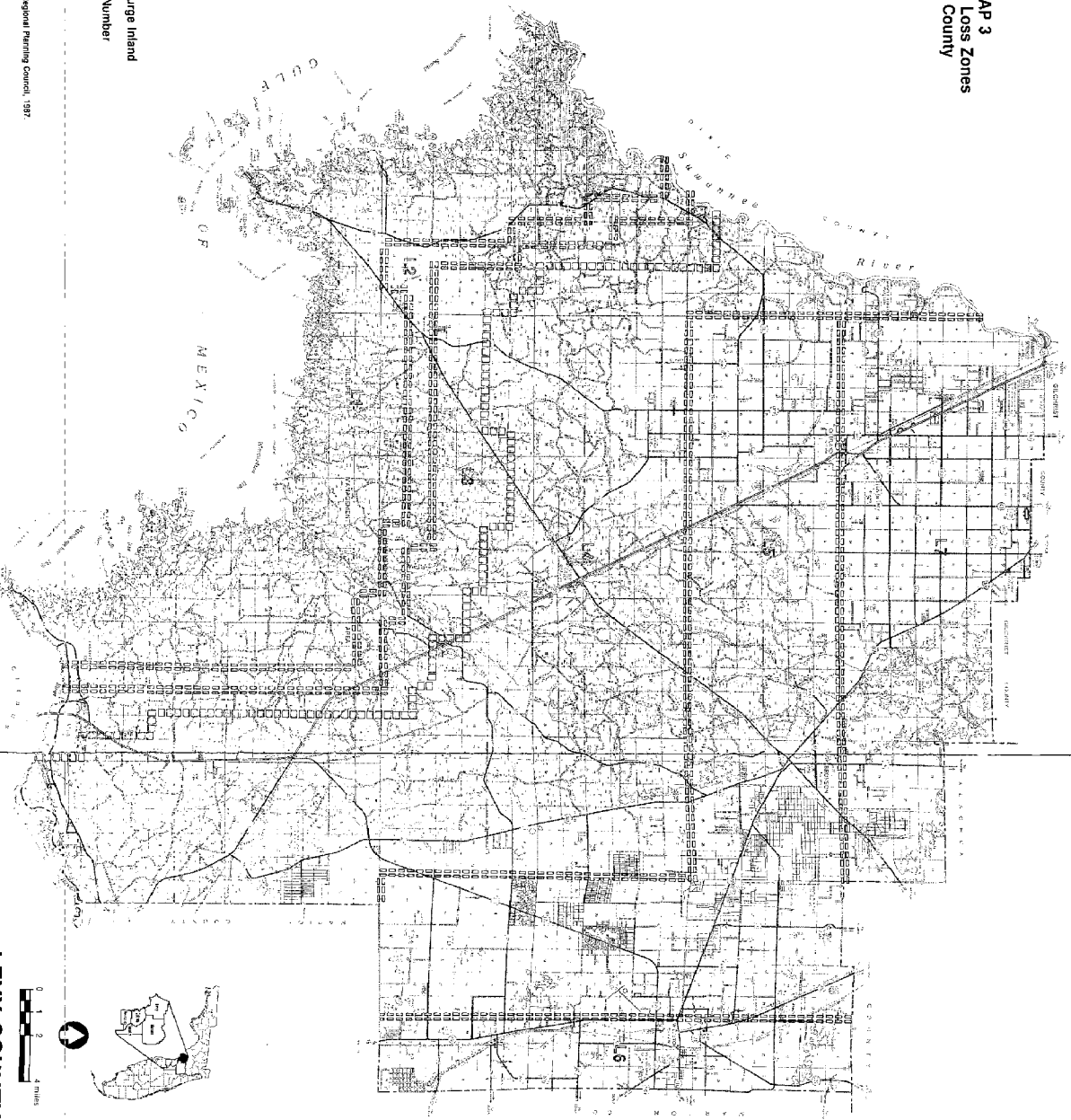
KEY:
 [Pattern] Extent of Surge Inland
 [Number] Loss Zone Number

SOURCE: Withlacoochee Regional Planning Council, 1987

Map prepared by the
 County Department of Transportation
 and Planning
 Withlacoochee Regional Planning Council

LEVY COUNTY
 FLORIDA

0 1 2 4 miles



MAP 4 Hurricane Loss Zones Marion County



KEY:
M1 Loss Zone Number

SOURCE: Whitehouse Regional Planning Council, 1987.

Map was prepared by the
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MARION COUNTY
FLORIDA

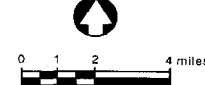
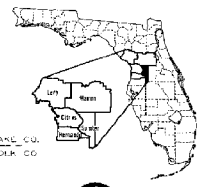


MAP 5
Hurricane Loss Zones
Sumter County

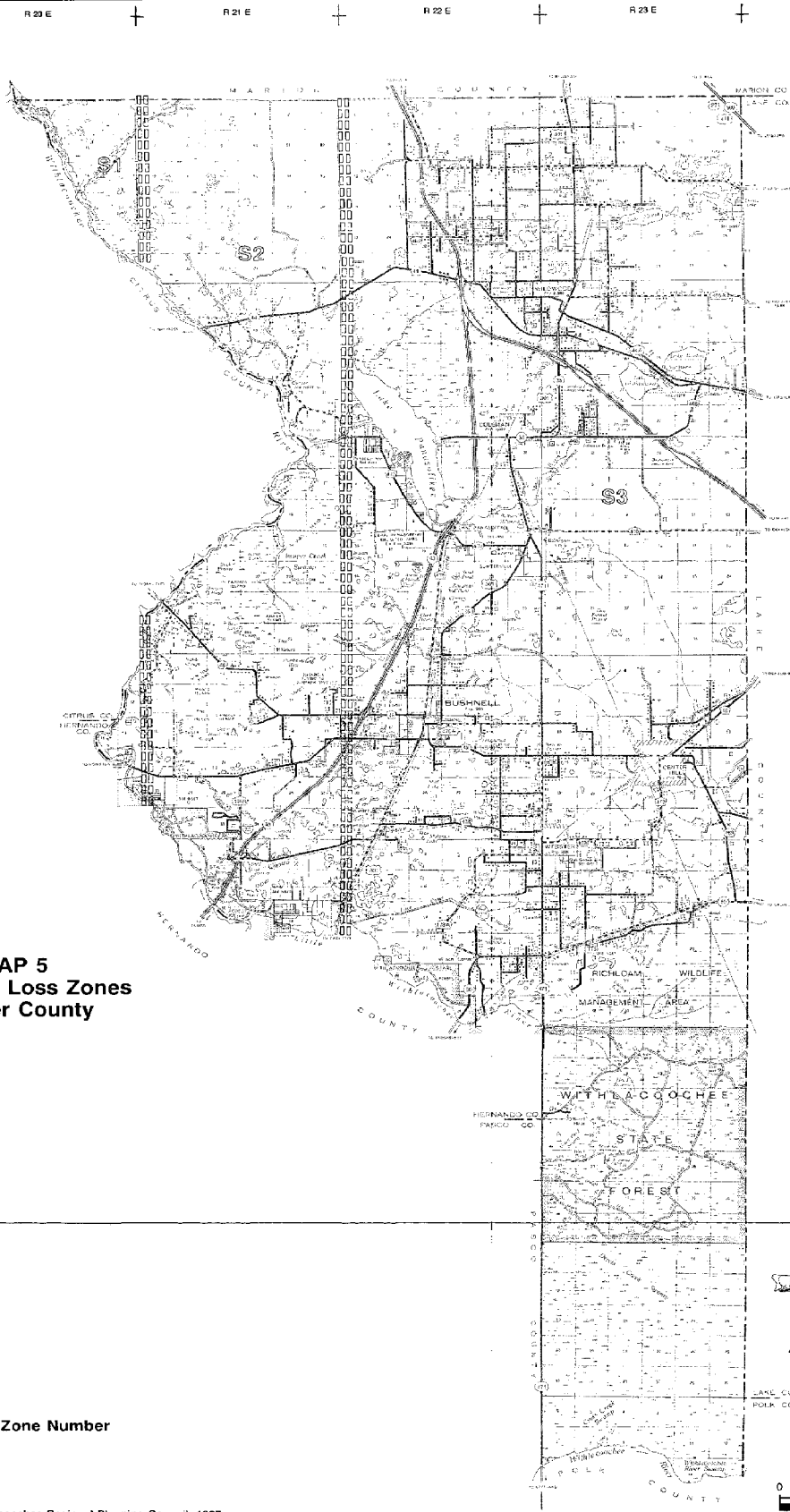
KEY:
S1 Loss Zone Number

SOURCE: Withlacoochee Regional Planning Council, 1987.

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



SUMTER COUNTY
FLORIDA



Peak Gust Conversions

SPLASH II predicted
maximum winds x 1.43 = peak gust over open water.

SPLASH II predicted x 1.22 = peak gust over developed coastline.
maximum winds

SPLASH II predicted x 1.11 = peak gust for wooded areas and
maximum winds rolling hills

(West Florida Region Hurricane Loss and
Contingency Planning Study, 1985.)

Using the factor for woodland and rolling hills, one minute sustained winds were recalculated at peak gust values. Hurricane winds will also be modified inland as the friction of the land surface reduces peak gusts. The loss of sustaining ocean moisture and heat will also lead to a decrease of wind speeds. Values of wind decay inland were calculated using Malkin's (1959) factor, which estimates a 2 percent decrease in wind values every 5 miles inland. Goldman and Ushijima (1974) refined this factor for distance greater than 30 miles inland. The wind decay decreases to 3 percent every 10 miles inland after 30 miles. (Northeast Florida Hurricane Loss and Contingency Planning Study, 1985.)

Wind Decay Conversions

Distance inland from the Coast	Percent of original peak gust	Wind Value
0 miles	100%	150
5 miles	98%	147
10 miles	96%	144
20 miles	92%	138
30 miles	88%	132
50 miles	82%	123

(Malkin, 1959, Goldman and
Ushijima, 1974.)

SPLASH II surge heights were updated to incorporate a high tide, and maximum wave set-up for the worst case scenario. Coastlines of Levy, Citrus and Hernando Counties receive mixed diurnal and semi-diurnal tides. Surge height and the distance surge travels inland was estimated using the inland routing methodology. Surge values predicted by the SPLASH II model are projected inland until the height of the surge above land is zero, for twenty transects along the coastline. The zones determined as surge-prone represent the hurricane vulnerability zones designated in the Withlacoochee Hurricane Evacuation Study (1984). The

projection of surge inland using the inland routing method does not include the increased surge height due to breaking wave build-up. Wave action on top of surge will only be a factor at the immediate coastline. Velocity surge will affect areas for only about one hundred yards inland (National Hurricane Center, personal communication), therefore only the sections adjacent to the coastline in Levy, Citrus and Hernando County are predicted to experience velocity surge.

Insurance, surveyor, engineering and research sources (Tampa Bay Hurricane Loss and Contingency Planning Study, 1983) provided estimates of the percentage damage based upon wind and surge values. Loss curves were compiled by estimating the percentage loss structures would experience at increasing levels of hazard (Figures 2 and 3). Percentage loss values were determined from loss curves for 12 structure types; vacant, single-family residential, multi-family residential, mobile home, commercial, service, manufacturing, public utilities, agricultural, health-care, public transportation and governmental and institutional. Figures 2 and 3 show loss curves for both surge and wind damage. From these curves vulnerability coefficients, representing the amount of vulnerability for structural loss, are derived. Velocity surge coefficients have been produced for areas vulnerable to the forces of surge, coupled with wave action. These losses are higher than losses from surge only vulnerability coefficients (Figure 2).

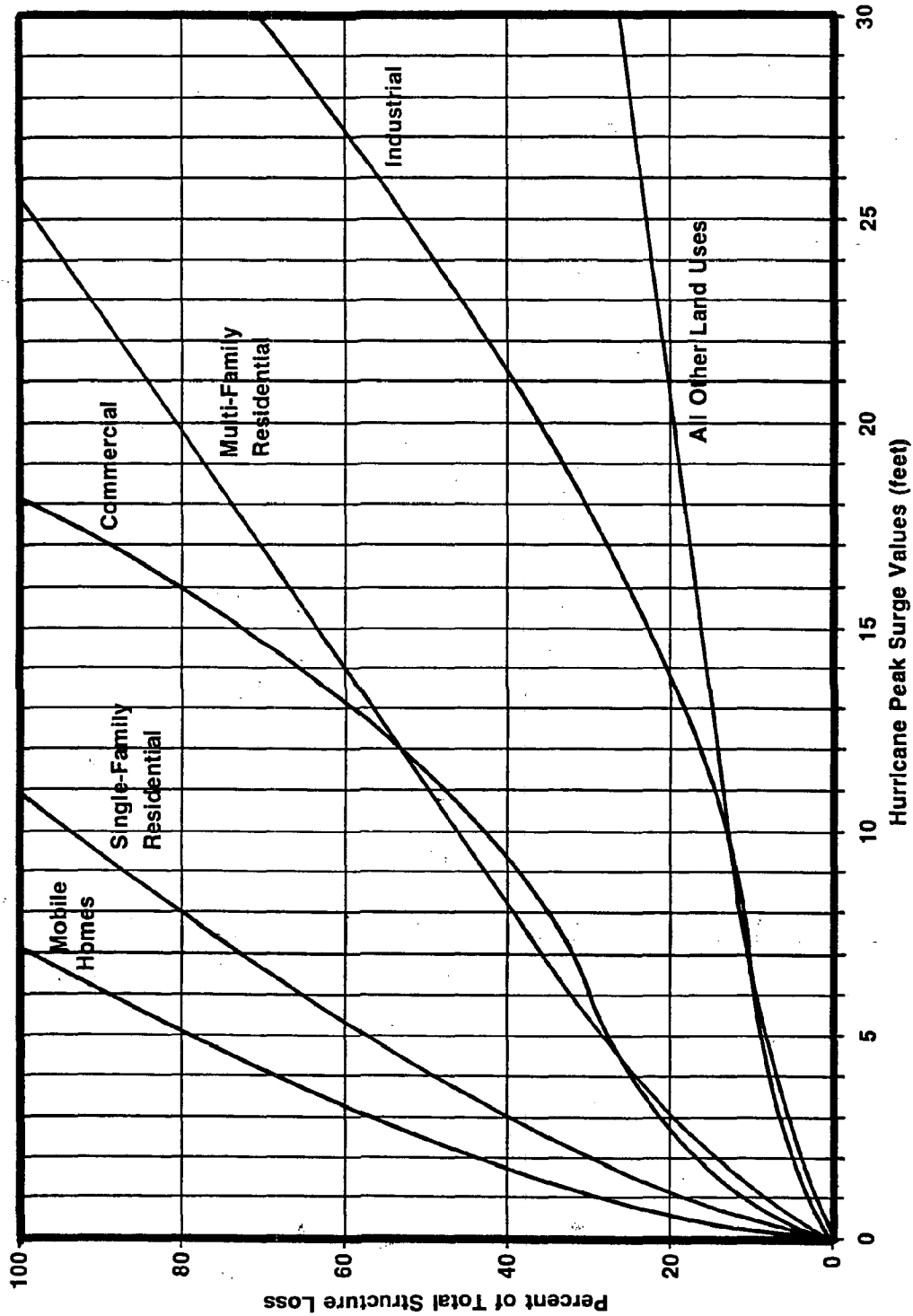
TABLE 2
PERCENTAGE DAMAGE CAUSED BY VARIED HEIGHTS
OF VELOCITY SURGE

Percent Loss to Structure						
Surge Height (ft.)	Single- Family Residential	Multi- Family Residential	Mobile Home	Com- mercial, Service	Industrial	All Other Land Uses
1	26.0%	14.0	76.0	14.0	4.2	4.5
2	36.3	20.0	100.0	20.0	6.0	5.9
4	59.3	30.0	100.0	30.0	9.0	8.4
6	67.3	36.0	100.0	36.0	10.8	10.2
8	72.0	44.0	100.0	44.0	13.2	11.7
10	76.0	49.0	100.0	49.0	14.7	13.0
15	100.0	100.0	100.0	100.0	30.0	16.2
20	100.0	100.0	100.0	100.0	44.0	19.2

Source: "Tampa Bay Region Hurricane Loss and Contingency Planning Study," Tampa Bay Regional Planning Council, 1983.

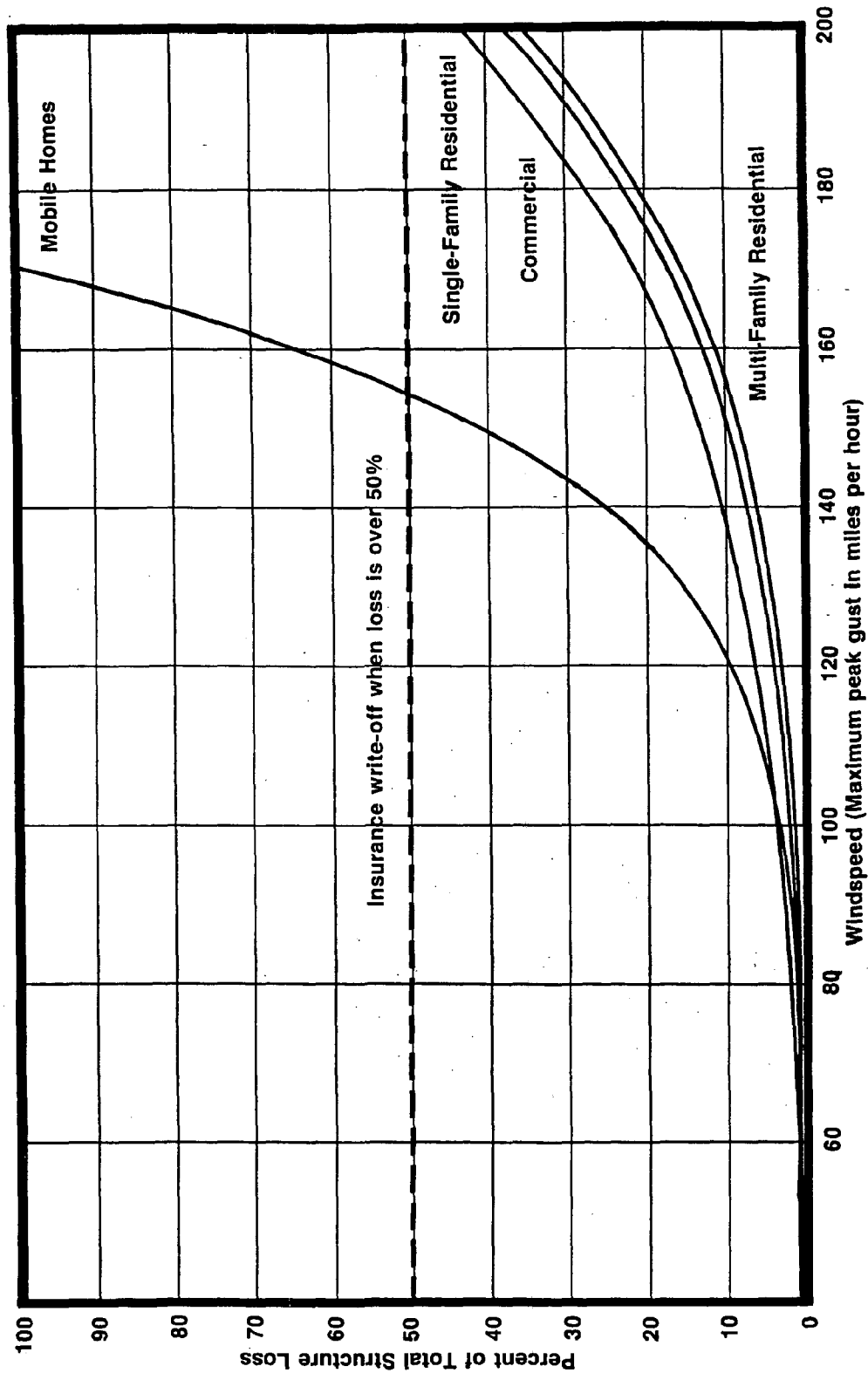
FIGURE 2

Damage Caused by Storm Surge to Single-Family Residential, Multi-Family Residential, Mobile Home, and Commercial Industrial and All Other Land Uses



SOURCES: "Tampa Bay Region Hurricane Loss and Contingency Planning Study," 1983.
Withlacoochee Regional Planning Council, 1987.

FIGURE 3
Damage Caused by Wind to Single-Family Residential, Multi-Family Residential, Mobile Home, and All Other Land Uses



SOURCES: "Tampa Bay Region Hurricane Loss and Contingency Planning Study," 1983.
 Withlacoochee Regional Planning Council, 1987.

Where both wind and surge (or velocity surge) are instrument, a combination of derived vulnerability coefficients produces the actual coefficient of vulnerability.

$$\begin{array}{lclclcl} \text{Actual} & & & & & & \\ \text{Coefficient} & & \text{percent loss} & & \text{percent loss} & & \\ \text{of} & = & \text{from hurricane} & + & \text{from surge} & - & \\ \text{Vulnerability} & & \text{winds} & & & & \\ & & & & \text{percent loss} & & \text{percent loss} \\ & & & & \text{from hurricane} & \times & \text{from surge} \\ & & & & \text{wind} & & \end{array}$$

Vulnerability coefficients for each land use type were calculated for each section of loss zones by determining percent damage from relevant surge and/or wind values predicted by SPLASH II. The coefficient for each structural type was multiplied by the appraised value of the structure to determine projected loss. County property appraisal data provide structural value information. County property appraisers maintain records of structural value by land use type and location on an annual property assessment roll. The vulnerability coefficients were used to provide potential loss values by section for each land use, and values were aggregated into loss zones (Appendix C). The projected structural dollar value loss was calculated for each hurricane scenario in the same way for each loss zone, using vulnerability coefficients derived from SPLASH II surge and wind predictions for different hurricane categories. As expected values of loss to structures increase as stronger winds and higher surge are predicted by SPLASH II (Appendix C).

ANNUALIZED LOSS

Values of annualized loss were calculated using the return periods in Chapter 2 (Table 5) and the summary of losses (Appendix C). Appendix D shows the annualized loss values by land use type for each loss zone. These figures represent the potential loss each year for each hurricane. The annualized losses for category 1 and 2 storms are higher; therefore, because the probability of occurrence of those storms is higher. Annualized losses for category 5 storms, are extremely low, as the estimated return period is once every 1500 years. The potential losses for a category 5 storm although higher than losses for lower categories of storm, are much lower in annual terms because of the improbability of the event.

CHAPTER 2
PROBABILITY ANALYSIS OF HURRICANE
OCCURRENCE IN THE WITHLACOOCHEE REGION

PROBABILITY ANALYSIS OF HURRICANE
OCCURRENCE IN THE WITHLACOOCHEE REGION

The Withlacoochee region's coastline is one of the least vulnerable to hurricane activity throughout the State of Florida. Hurricane activity is lowest in the Big Bend area of the State. The coastal population of the Big Bend area has been historically lower than most other areas of Florida, so direct hits to the region may not have been well documented in the past. Surge heights and wind speed estimations are subsequently questionable for early records. Using the Saffir Simpson scale (Table 3) hurricane categories have been assigned on the basis of recorded wind speeds. It should be noted, however, that accuracy is limited to the accuracy of the historical recording.

TABLE 3
THE SAFFIR SIMPSON HURRICANE CLASSIFICATION

Hurricane Category	Central Pressure (millibars)	Winds (mph)	Surge (ft)	Surge + Waves (ft)
1	980	74 - 95	4 - 5	6.2 - 7.7
2	965 - 979	96 - 110	6 - 8	9.3 - 12.4
3	945 - 964	111 - 130	9 - 12	13.9 - 18.6
4	920 - 944	131 - 155	13 - 18	20.1 - 27.9
5	919 and below	156 +	18 +	28 +

Source: Herbert and Saffir, Dade County, Florida, Consulting Engineer, and Dr. Robert Simpson, former National Hurricane Center Director.

Technically, a tropical cyclone is defined as a hurricane when one minute maximum sustained winds reach, or are above 74 miles per hour (or 64 knots). A tropical storm is characterized by winds between 39 and 73 mph. The Saffir Simpson scale categorizes storms on the basis of wind speed, central pressure and surge heights. Hurricane winds may be greater than 200 mph for a category 5 hurricane, accompanied by over 18 feet of tidal surge.

REGIONAL ANALYSIS

The regional effects of hurricanes were calculated using a central point - Crystal River. Hurricanes passing within 120 nautical miles of Crystal River were taken as regional climatology. A point midway along the coast of each county was taken for the probability analyses by county. Analyses by county were for hurricanes within 100 nautical miles. Between 1886 and 1985, 34 hurricanes and 18 tropical storms have passed within 120 nautical miles of the Withlacoochee region. Fifteen hurricanes have passed within 50 miles or less of Crystal River (Table 4). The Withlacoochee region has a coastline of approximately 100 miles, so it may be assumed that of the 15, those that did make landfall did so in the region. Table 4 shows the approximate storm heading at the closest point of approach. Five storms were travelling northwest and four almost directly north. Of the 34 total hurricanes within 120 nautical miles 11 have been moving north (338-002 degrees), 14 northeast (023-067), 6 northwest (293-338) and 2 west (248-293). Hurricane Elena in 1985 looped twice before landfall and is recorded as moving southwest.

Since 1886 seventeen of the 34 hurricanes passing within 120 nautical miles have been category 1 storms. There have been 11 category 2 and 6 category 3 hurricanes. Using the following formula approximate regional return periods may be calculated:

$$\begin{array}{rcl} \text{Return period} & = & \text{Number of years} \\ \text{in years} & & \text{recorded} \quad \quad \quad \text{X} \quad \quad \quad \text{Length of coastline} \\ & & & & & \text{over which hurricane} \\ & & & & & \text{occurred} \\ & & \text{Number of} & & \text{Affected area} \\ & & \text{occurrences in} & & \\ & & \text{a given category} & & \end{array}$$

It is assumed that loss sustained during a category 1 storm will be equalled or exceeded by higher categories. The number of occurrences in each category includes the number in that category and higher categories. For example, a category 2 return period would be calculated using the number of category 2 and 3 storms between 1886 and 1985. The number of category 4 and 5 storms would be included had any occurred. The regional probability analysis predicts that a category 1 storm will pass within 120 nautical miles every 3 years. It should be noted that the 120 nautical mile radius includes storms that occur on the east coast also. Category 2 hurricanes are estimated to occur every 6 years and a category 3 storm be present every 17 years.

TABLE 4
TROPICAL CYCLONES PASSING WITHIN 120
NAUTICAL MILES OF CRYSTAL RIVER,
1886 - 1985

Date	Month	Highest Maximum Wind 1	2 Category	Closest Point of Approach 3	Storm Heading
1886	06	94	1	105	023
1886	07	97	2	48	037
1886	07	98	2	42*	049
1888	10	95	1	10*	046
1893	06	86	1	39	046
1893	08	120	3	89	342
1894	09	101	2	74	015
1894	10	103	2	85	045
1896	09	107	2	22	021
1898	08	75	1	89	313
1898	10	98	2	108	297
1899	08	77	1	96	030
1921	10	101	2	87	060
1925	12	80	1	99	035
1926	07	78	1	19	313
1928	09	118	3	32*	009
1935	09	95	1	43	017
1939	08	79	1	77*	301
1941	10	89	1	112	358
1944	10	75	1	45	017
1945	06	98	2	50*	051
1945	09	94	1	50*	014
1947	10	77	1	112	264
1949	08	89	1	16*	350
1950 Easy	09	125	3	37*	318
1950 King	10	77	1	9*	322
1960 Donna	09	117	3	77	030
1964 Dora	09	115	3	7	279
1966 Alma	06	98	2	67	053
1968 Gladys	10	83	1	47*	051
1979 David	09	98	2	87	356
1985 Bob	07	75	1	109	355
1985 Elena	09	122	3	93	157
1985 Kate	11	86	1	106	051

1 - Maximum winds in miles per hour.

2 - Category based upon highest maximum winds.

3 - Closest point of approach in nautical miles.

*Direct Hits to the Withlacoochee Region.

Sources: National Hurricane Center, Coral Gables, Florida
Withlacoochee Regional Planning Council, 1987.

Since no category 4 or 5 hurricanes have passed the region since 1886 the formula may be modified to estimate this as a function of the coastline from Texas to Maine.

$$\text{Return period} = \frac{\text{Number of years recorded}}{\text{Number of occurrences from Texas to Maine}} \times \frac{\text{Length of Coastline Texas to Maine}}{\text{Length of coastline of Withlacoochee Region}}$$

Petak and Atkisson (1982)

For example, there have been 13 category 4 storms and 2 category 5 storms within an 82 year period, therefore:

$$\begin{array}{l} \text{Category} \\ \text{4 return} \\ \text{period} \end{array} = \frac{82}{15} \times \frac{3700}{100} = 202 \text{ years}$$

The return period for a category 5 storm is approximately once every 1500 years. Only two category 5 hurricanes have ever landfalled on the East and Gulf coasts, and the return period is long because of the short length of the region's coastline. Hurricane Camille hit the Mississippi coast in 1969 and the Florida Keys were hit by a category 5 storm in 1935.

The last storm to pass within 120 nautical miles of the region was Hurricane Kate in November 1985. The last direct hit was experienced in October of 1968 when Hurricane Gladys, a category 2 storm, hit Hernando County. There have been only 10 direct hits to the region. There have been 6 category 1, 2 category 2 and 2 category 3 storms. When only these are considered the return periods are longer (Table 5). The regional frequency of storms by month is shown in Table 6.

ANALYSIS BY COUNTY

Analyses of return periods were also carried out for each coastal county. However, the storm inventory was for those tropical cyclones within 100 nautical miles of a central point in each county. The individual inventories are shown in Tables 8, 9 and 10. Return periods for each are shown in Table 5, and percent occurrence by month of the year in Table 6. Return periods for direct hit storms are substantially lower than for the presence of a storm within 100 nautical miles.

TABLE 5

HURRICANE RETURN PERIODS FOR THE
WITHLACOOCHEE REGION

County/Area	Category				
	1	2	3	¹ 4	¹ 5
² Levy	3.4 yrs	5.6	25.0	202	1500
² Citrus	3.8	9.1	16.7	202	1500
² Hernando	3.1	5.3	11.5	202	1500
³ Regional	2.9	5.8	16.7	202	1500
⁴ Regional Direct Hits	10.0	25.0	50.0	202	1500

1 - Return periods as a function of occurrence from Texas to Maine.

2 - Hurricane returns for a 100 nautical mile radius around the center of the county.

3 - Hurricane returns for a 120 nautical mile radius around Crystal River.

4 - Return period based upon direct hits to the region of hurricanes passing within 120 nautical miles of Crystal River.

Sources: National Hurricane Center, Coral Gables, Florida
Withlacoochee Regional Planning Council, 1987.

The National Hurricane Center defines "hurricane season" as between June 1st and November 30th. The Withlacoochee region receives almost sixty percent of hurricane activity during September and October (Table 7). Levy County receives slightly more hurricanes during these months, based on the records of occurrence from 1896 to 1985. Hernando County has a higher occurrence of storms during July than June, the reverse of which is true for Citrus and Levy Counties. The historical occurrences also suggest that higher category storms landfall during the month of September. In Levy and Citrus Counties category 3 hurricanes have all occurred during the month of September. It should be noted that none of these observations are statistically significant due to the lack of recordings. Storm headings, however, have a much more obvious pattern, with over eighty percent of storms moving either north, northeast or northwest. Thirty percent or more of storms have been moving in a northeasterly direction (Figure 4).

Although the observations are not statistically significant, seasonal patterns of hurricane formation are well researched. Many factors, still not completely understood, affect hurricane formation. It is hypothesized that the El Nino phenomenon, the shift of winds in the lower tropical stratosphere known as the Quasi-Biennial Oscillation, and changes in sea-level air pressure in the Caribbean Basin-Gulf of Mexico area all affect hurricane initiation. Similarly strong west-to-east wind flow below the stratosphere in the Caribbean Basin-Gulf of Mexico areas is thought to suppress hurricane activity. Variations of hurricane formation patterns occur annually and throughout the season, with years spawning considerably more or fewer hurricanes. The hurricane season is divided up into three general periods. June and July are characterized by hurricanes formed in the Gulf of Mexico. In August and September hurricanes will form in the Atlantic, and some as far east as the Azores. By late September and October the Caribbean becomes the area of origin. It may not be directly assumed, however, that the Withlacoochee region is specifically affected by hurricanes of Caribbean origin.

All the implications provided by historical records must be considered with caution. Accurate recordings of windspeed and surge heights, even today, are hampered by equipment destruction during storms. Prior to satellite weather maps, exact positions and tracks of hurricanes were difficult to establish. No hurricane track can be based upon historical evidence alone and predictions of landfall are still made for a minimum of 100 miles of coastline even 24 hours prior to landfall. Similarly, it is difficult to produce statistical estimations of reoccurrence when hurricane categories and direction alter so rapidly. Levy County, for example, was under a hurricane warning for over 30 hours during Hurricane Elena before it eventually hit the Mississippi coast. To make more accurate predictions data must be collected for several more centuries to decrease statistical inaccuracy. If technological advances make it easier to track and predict hurricane movement such lengthy records may be unnecessary.

TABLE 6
STORM OCCURRENCE BY MONTH IN THE
WITHLACOOCHEE REGION,
1886 - 1985

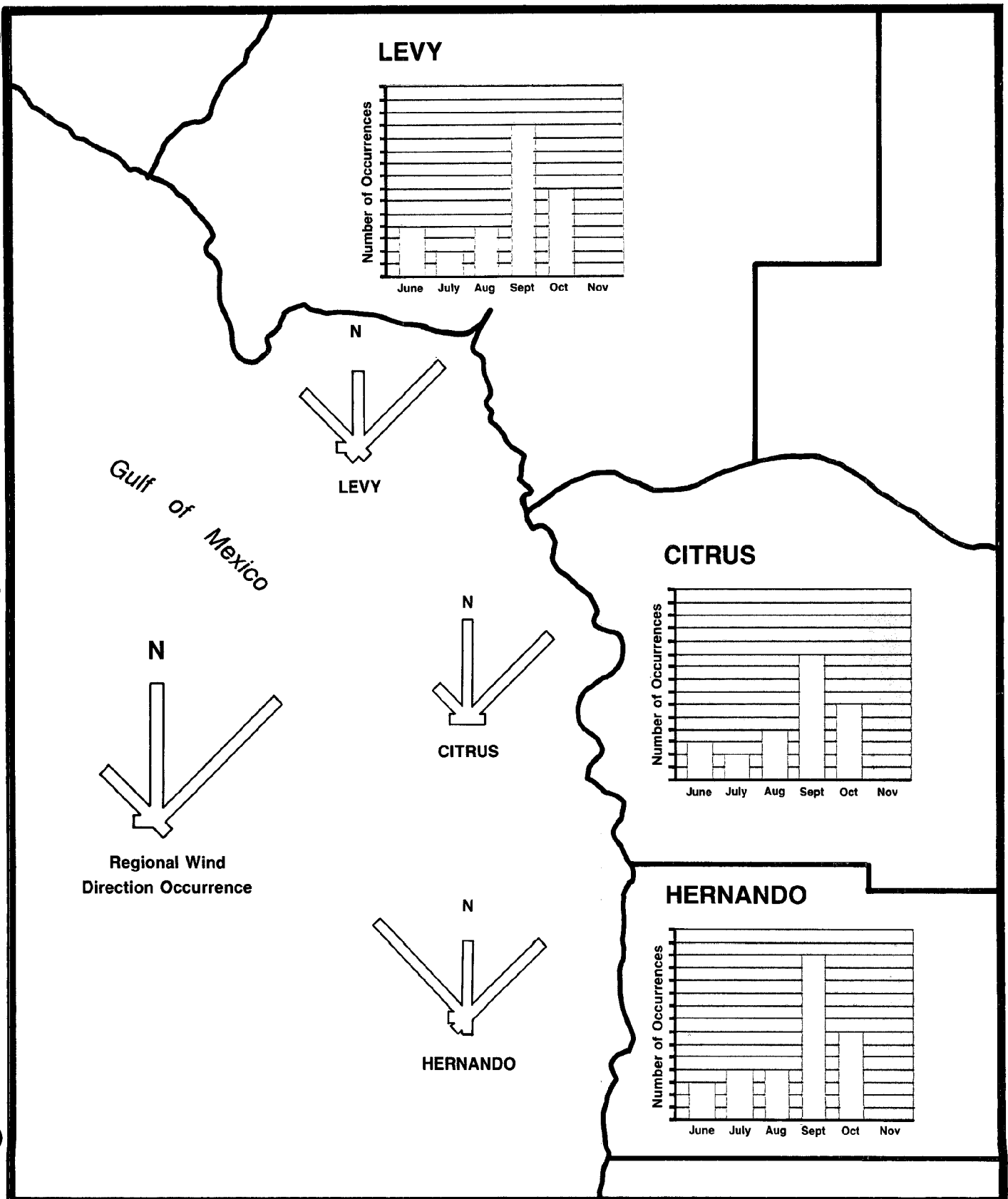
Month	Region	Hernando	Citrus	Levy
June	4	3	3	4
July	4	4	2	2
August	5	4	4	4
September	10	13	10	12
October	9	7	6	7
November	1	-	-	-
December	1	1	1	-

TABLE 7
STORM OCCURRENCE BY HEADING IN THE
WITHLACOOCHEE REGION,
1886 - 1985

Heading (Degrees)	Region	Hernando	Citrus	Levy
023 - 067 (NE)	14	10	11	11
068 - 112 (E)	-	-	-	-
113 - 157 (SE)	1	-	1	1
158 - 202 (S)	-	1	-	-
203 - 247 (SW)	-	1	-	1
248 - 292 (W)	2	1	1	2
293 - 337 (NW)	6	12	4	7
337 - 002 (N)	11	7	9	7

Sources: National Hurricane Center, Coral Gables, Florida, 1987.
Withlacoochee Regional Planning Council, 1987.

FIGURE 4
Historical Storm Occurrence by Heading and Date
in the Withlacoochee Region 1886 - 1985



SOURCE: Withlacoochee Regional Planning Council, 1987.

TABLE 8

TROPICAL CYCLONES PASSING WITHIN 100 NAUTICAL MILES
OF HERNANDO COUNTY, 1886 - 1985

Year	Month	Highest Maximum Wind 1	2 Category	Affected Counties	3 Direction
1886	July	97	2	Taylor-Dixie	F
	July	98	2	Cedar Key	D
1888	Oct.	97	2	Cedar Key	D
1893	June	86	1	Taylor	F
1894	Sept.	115	3	Sarasota	P
1896	Sept.	110	2	Dixie	N
1898	Aug.	78	1	Hillsborough - Pinellas	E
1911	Aug.	80	1	Gulf of Mexico	P
1912	Sept.	77	1	Hit AL - MS	F
1921	Oct.	115	3	Pasco-Hernando	N
1925	Dec.	74	1	Sarasota	P
1926	July	78	1	Brevard	P
	Sept.	121	3	Lee	E
1928	Sept.	128	3	Hernando-Citrus Sumter-Marion	D
1929	Sept.	102	2	Bay-Gulf	F
1933	Sept.	84	1	Hernando-Citrus	E
1935	Sept.	110	2	Taylor-Dixie	F
1936	July	74	1	Gulf of Mexico	F
1939	Aug.	76	1	Hernando	E
1941	Oct.	107	2	Franklin	P
1944	Oct.	75	1	Sarasota	N

TABLE 8 CONTINUED

TROPICAL CYCLONES PASSING WITHIN 100 NAUTICAL MILES
OF HERNANDO COUNTY, 1886 - 1985

Year	Month	Highest Maximum Wind 1	2 Category	Affected Counties	3 Direction
1945	June	107	2	Hernando-Citrus	D
	Sept.	113	3	Sumter-Marion	D
1946	Oct.	75	1	Hernando-Citrus	D
1949	Aug.	115	3	Hernando-Citrus Levy	D
1950	Sept.	126	3	Hernando	D
	Oct.	80	1	Marion	D
1960	Sept.	123	3	Sarasota	N
1964	Sept.	108	2	St. Johns	P
1966	June	106	2	Taylor	P
1968	Oct.	80	1	Pasco-Hernando	D
1985	Sept.	126	3	off Cedar Key for 36 hours	P

Wind speed recorded near storm center, not at site.

1 - Highest maximum winds are in miles per hour.

2 - Category based on highest maximum winds.

3 - Direction: P - Parallel to region
N - Normal, NE to E path
E - Exiting on West Coast
F - Fringe approx. 100 miles from region
D - Directly through region

Sources: National Hurricane Center, Coral Gables, Florida, 1987.
U.S. Dept. of Commerce, National Oceanic and Atmospheric
Admin. (1981). "Tropical Cyclones of the
North Atlantic Ocean, 1871 - 1980."
Withlacoochee Regional Planning Council, 1987.

TABLE 9

TROPICAL CYCLONES PASSING WITHIN 100 NAUTICAL MILES
OF CEDAR KEY (LEVY COUNTY),
1886 - 1985

Year	Month	Highest Maximum Wind 1	2 Category	Affected Counties	3 Direction
1886	June	95	1	Franklin	F
	July	98	2	Taylor-Dixie	F
	July	98	2	Cedar Key	D
1888	Oct.	97	2	Cedar Key	D
1893	June	88	1	Taylor	F (N)
1894	Sept.	98	2	Entered Charlotte	P
	Oct.	101	2	Exit Flagler Franklin	F
1896	Sept.	109	2	Dixie	N
1898	Aug.	76	1	Hillsborough- Pinellas	E
1899	Aug.	79	1	Franklin	F
1903	Sept.	77	1	Manatee-Pinellas	E
1912	Sept.	80	1	Hit AL-MS	F
1921	Oct.	107	2	Pasco-Hernando	N
1928	Sept.	118	3	Hernando-Citrus Sumter - Marion	D
1929	Sept.	99	2	Bay-Gulf	F
1935	Sept.	101	2	Taylor-Dixie	F
1939	Aug.	80	1	Pasco	E
1941	Oct.	98	2	Franklin	P
1944	Oct.	75	1	in Sarasota out Duval	N
1945	June	107	2	Hernando-Citrus	D
	Sept.	98	2	Sumter-Marion	D

TABLE 9 CONTINUED
TROPICAL CYCLONES PASSING WITHIN 100 NAUTICAL MILES
OF CEDAR KEY (LEVY COUNTY),
1886 - 1985

Year	Month	Highest Maximum Wind 1	2 Category	Affected Counties	3 Direction
1949	Aug.	88	1	Hernando-Citrus- Levy	D
1950	Sept.	126	3	Hernando	D
	Oct.	75	1	Marion	D
1960	Sept.	117	3	Sarasota	N
1964	Sept.	109	2	St. Johns	P
1966	June	101	2	Taylor	P
1968	Oct.	80	1	Pasco-Hernando	D
1985	Sept.	126	3	off Cedar Key for 36 hours	P

Wind speed recorded near storm center, not at site.

1 - Maximum winds in miles per hour.

2 - Category based upon maximum winds.

3 - Direction - P - Parallel to Region
N - Normal NE to E path
E - Exiting on West Coast
F - Fringe approx. 100 miles from region
D - Directly through region

Sources: National Hurricane Center Coral Gables, Florida, 1987.
U. S. Dept. of Commerce, National Oceanic and Atmospheric
Administration (1981). "Tropical Cyclones of the North
Atlantic Ocean, 1871 - 1980."
Withlacoochee Regional Planning Council, 1987.

TABLE 10

TROPICAL CYCLONES PASSING WITHIN 100 NAUTICAL MILES
OF CRYSTAL RIVER (CITRUS COUNTY),
1886 - 1985

Year	Month	Highest Maximum Wind 1	2 Category	Affected Counties	3 Direction
1886	July	95	1	Taylor-Dixie	F
	July	98	2	Cedar Key	D
1888	Oct.	95	1	Cedar Key	D
1893	June	86	1	Taylor	F
	Aug.	118	3	Atlantic Ocean	F
1894	Sept.	92	1	Sarasota	P
	Oct.	100	2	Franklin	F
1896	Sept.	107	2	Dixie	N
1898	Aug.	75	1	Hillsborough- Pinellas	E
1921	Oct.	100	2	Pasco-Hernando	N
1925	Dec.	74	1	Sarasota	P
1928	Sept.	111	3	Hernando-Citrus Sumter-Marion	D
1935	Sept.	93	1	Taylor-Dixie	F
1939	Aug.	77	1	Hernando	E
1944	Oct.	75	1	in Sarasota out Duval	N
1945	June	92	1	Hernando-Citrus	D
	Sept.	86	1	Sumter-Marion	D
1949	Aug.	75	1	Hernando-Citrus- Levy	D
1950	Sept.	121	3	Hernando	D
	Oct.	75	1	Marion	D
1960	Sept.	115	3	Sarasota	N

TABLE 10 CONTINUED

TROPICAL CYCLONES PASSING WITHIN 100 NAUTICAL MILES
IF CRYSTAL RIVER (CITRUS COUNTY),
1886 - 1985

Year	Month	Highest Maximum Wind 1	2 Category	Affected Counties	3 Direction
1964	Sept.	115	3	St. Johns	P
1966	June	80	1	Taylor	P
1968	Oct.	82	1	Pasco-Hernando	D
1979	Sept.	98	2	Brevard	P
1985	Sept.	126	3	Off Cedar Key for 36 hours	P

Wind speed are recorded near storm center, not at site.

1 - Highest maximum winds are in miles per hour.

2 - Category is based upon highest maximum winds.

3 - Direction: P - Parallel to region
N - Normal NE to E path
E - Exiting on West Coast
F - Fringe approx. 100 miles from region
D - Directly through region

Sources: National Hurricane Center, Coral Gables, Florida, 1987.
U. S. Dept. of Commerce, National Oceanic and
Atmospheric Administration (1981). "Tropical Cyclones
of the North Atlantic Ocean 1871 - 1980."
Withlacoochee Regional Planning Council, 1987.

CHAPTER 3
AGRICULTURAL LOSS INVENTORY

AGRICULTURAL LOSS INVENTORY

This section computes estimates of annual agricultural yields for dairy, livestock, timber, citrus, field crop, vegetable, deciduous fruit, poultry, fish and shellfish practices. Potential losses to annual yields are estimated for each hurricane scenario, by loss zone.

AGRICULTURAL PRACTICES

The Withlacoochee region has annual agricultural sales that exceed \$150 million. The State average for the percentage of land in farmland is 69.6 percent. Three of the counties within the Withlacoochee region exceed the State average. Levy and Sumter Counties have over 90 percent farmland (Table 11), while Hernando County has just under 25 percent farmland. On average, throughout the State, farmland is divided into 29 percent cropland, 51 percent forested and 20 percent for other agricultural uses. Levy and Citrus Counties exceed the State average for forest land with over 60 percent. Hernando and Sumter Counties have over 40 percent of their acreage in farmland under crop cultivation, which includes watermelon, citrus, hay, cucumber, peppers, squash and tomatoes.

All the counties within the region grow watermelon and, with the exception of a small area of tomato cultivation in Marion County, Sumter County grows all other vegetables in the region (Table 12). The field crops grown in the region include corn, soybeans and sorghum, which are grown primarily in Marion and Levy Counties (Table 13). All field crops and vegetables grown have harvest periods that coincide with the hurricane season (Table 14) and, as a result, could potentially be severely disruptive to the farming economy. Although many citrus trees have been damaged by recent freezing weather the citrus industry in the region is beginning to replant lost acreage. Many replanted areas contain trees that have not yet reached bearing age (Table 15). Hurricanes interfere with citrus production, not only do they damage trees, but also cause premature fruitfall. Similar damage occurs to other deciduous fruits, especially blueberries, grown primarily in Citrus County. Ornamental plants have recently been introduced as a nursery crop into the region as an extension of the Pasco-Pinellas growing region. Several types are grown. Woody ornamentals are grown primarily outside, and other exotic ornamental species are grown in greenhouses. The susceptibility of greenhouses to high wind damage makes these plants vulnerable to loss during a hurricane.

The livestock industry is also economically valuable to the region, with annual dairy produce worth over \$10 million. Sales of cattle and calves were worth \$30 million in 1982 (Tables 16, 17 and 18). A hurricane strike would cause disruption of this industry, however, loss of livestock is expected to be minimal. The fish and shellfish industry's processing plants are situated

in hurricane vulnerable locations along the coastline. Hurricanes produce a potential threat to this over \$6 million industry (Table 19), should natural marine habitats be altered. Similarly, excess fresh water from rainfall, or hurricane induced pollution could close shellfish beds. The region's poultry industry has been undergoing a number of changes. Sumter County has witnessed a decline in the total number of individual farms (Table 20), however, an increase in total laying capacity has been established as farms amalgamate. The structures associated with the poultry industry are traditionally fragile. Notable livestock practices in the region include an experimental goat farm in Citrus County and Hernando County's \$3.5 million alligator industry.

VALUE OF AGRICULTURAL LOSS METHODOLOGY

Total annual incomes for agricultural yields in each county were calculated. The annual value of agricultural products was obtained from the Census of Agriculture (1982), or Florida Crop and Livestock Reporting Service, where available. For field, vegetable and citrus crops, the average yield per acre was multiplied by the number of acres of each production (Tables 12, 13 and 15). The value of the annual yield was obtained by multiplying the weight of the yield by the market price per weight. Peanuts and tobacco yields are measured in pounds, tomatoes in cartons, citrus by the box and watermelon yield is recorded by the hundred weight. All other crop yields are in bushels. The estimated milk production of the counties within the region was used to calculate an annual value of dairy produce. The number of milk cows was obtained from the Census of Agriculture, and updated by the County Extension Services. For each cow, a mean daily production of milk was estimated at 30.4 pounds, and using a value of \$16.40 per hundred weight of milk, the annual yield value was produced (Table 18). The number of layer farms in each county was used to estimate annual egg production value. A mean number of layers for the State of Florida was taken as 4,782. Using the average annual eggs per layer as 247 and average price per dozen eggs (1982) as \$0.496, potential annual poultry losses were calculated (Table 20). All figures and methodologies were approved and updated by the County Extension Services.

The County Extension Agents estimated as accurately as possible the percentages of each agricultural practice in each loss zone. Losses based upon wind and surge of each category of storm were calculated using the vulnerability coefficients for each section. Friedman (1974) provides wind damage curves for agriculture. These wind curves for percentage loss were used for estimating losses to field and vegetable crops. The ornamental plant industry includes both woody ornamental and indoor plant species. The fragility of both the plants and the greenhouses is high. The ornamental plant category was therefore divided into woody ornamentals grown outside and a category of more fragile plants grown in greenhouses. The plastic type greenhouses used by some nurseries for growth and storage cannot withstand winds over 70

miles per hour. A more sturdy greenhouse type is also used that can withstand winds up to 125 miles per hour. Above this threshold 100 percent loss was assumed. In the case of woody ornamentals the agricultural loss curves (Friedman 1974) were used to estimate percent losses based upon wind and surge values.

Citrus and timber estimated losses based upon the generic agricultural loss vulnerability coefficients provided by Friedman (1974), were considered unrealistic since these crops would not behave like field crops under strong winds (Marion County Extension Service, Florida Division of Forestry, personal communications). The loss was estimated for citrus crops at 15 percent greater than Friedman's figures. On the basis of experience with timber losses during Hurricane Eloise, 1975; Hurricane Frederic, 1979; Hurricane Elena and Hurricane Kate, 1985, timber losses increase 1 percent from zero to winds of 100 miles per hour (Florida Division of Forestry). Losses were estimated at 12 percent at 150 miles per hour and 20 to 25 percent at winds of 200 miles per hour. Storm surge has been noted to have little effect upon timber, above losses sustained by winds. An important aspect of timber losses is the accompanying rainfall, which unfortunately could not be included in the methodology, since SPLASH II does not predict rainfall.

Livestock losses are similarly affected more by rainfall than by wind or storm surge. A small percentage of cattle are farmed in the surge-prone zones of Citrus County, although previous experience during Hurricane Elena that stalled off Cedar Key for 36 hours in 1985, has shown that these livestock were moved to higher ground. The losses to cattle or horses are likely to be from falling trees, flying debris or river flooding. Any estimates of these phenomena would be highly subjective (Marion County Extension Service). Losses to poultry during hurricane conditions were based upon losses to the housing facility. Power outages are potentially a serious problem, but the high incidence of electrical storm activity in the region has prompted all poultry farmers to install independent generators. Therefore the losses to the poultry yield will depend upon the stability of the structure. Marion and Sumter County Extension Services considered the best estimates of the degree of loss experienced would be based upon the Friedman (1974) loss curve for mobile homes, as the best representation of poultry facilities.

Depending upon the percentage loss, or vulnerability coefficient, percentages of the total annual agricultural yield for each loss zone were calculated. Losses were taken as a percentage of annual yield to reflect actual losses to the agricultural crop that would result (Tables 22, 23, 24, 25 and 26).

TIMBER LOSSES

Timber loss values were calculated as percentages of the stumpage value of harvest for each county (Table 27). This represents an immediate loss, and long-term losses are not included in the regional timber loss value (Table 28). Long-term losses could

include lack of timber income while stands are replanted and grow to maturity. A reluctance to estimate timber losses relative to specific wind speeds or surge heights has stemmed from a variety of complicating factors. First, it is difficult to classify timber as an individual land use type since different species will act differently in high winds and flooding.

Second, the inability of the SPLASH model to predict rainfall prevents loss estimates from being adjusted to include this factor. If prolonged rain precedes hurricane force winds trees will be easier to uproot, and larger trees will be blown down more readily. Furthermore, river and lake flooding caused by rainfall is not considered.

Hurricane winds and flooding will have less effect upon trees than secondary phenomena. Wave-driven floodwater will destroy some timber, but saltwater flooding is unlikely to kill trees outright. Hurricane winds will cause damage but turbulence, downdrafts and tornadoes spawned from hurricanes will cause the majority of timber losses. Turbulence will be most prevalent between 10 and 50 miles inland. In the Withlacoochee region the Hernando/Citrus ridge, and inland lowlands, which include parts of the Withlacoochee State Forest, are expected to receive turbulence. Hurricane-related wind and turbulence damage to timber has not been experienced over 150 miles inland.

The loss estimates for timber do not include the value of timber that is salvaged. Timber salvage will potentially reduce the losses incurred. However, post-hurricane conditions are unlikely to be conducive to timber salvage. Roads may be impassable, and the ground too wet for the necessary machinery. After hurricane Kate, timberfall salvage in Tallahassee was only 2 to 5 percent, proving to be an unprofitable endeavor. If timber is in forest stands, a greater percentage may be salvaged at greater profit because it is proximal. At most, approximately half of all downed forest timber may be salvaged. The trees can only be used for pulp and saw timber. A 50 percent salvage rate is usually only possible if timber can be transferred to another profitable market quickly since the local market will quickly become flooded, depressing the price. Transfer of timber usually requires a gubernatorial waiver of truck road weight restrictions for transportation. If the waiver is not timely, timber will be lost to decay. During the months of June, July and August timber will be unsalvageable after 60 days. In the fall the cooler temperatures will delay decay, and the onset of bluestain which renders the log unsuitable for timber. The fall temperatures will afford salvage crews up to a 90 to 120 day salvage period.

A large percentage of the Withlacoochee region is forested. Ninety-seven percent of acreage in Levy County is farmland, 67 percent of which is timber. Citrus, Hernando, and Sumter Counties all contain parts of the Withlacoochee State Forest, and a considerable percentage of Marion County east of the Oklawaha River is contained in the Ocala National Forest. Estimated dollar losses by loss zone are shown in Table 28.

TABLE 11

FARMLAND IN COUNTIES WITHIN THE WITHLACOCHEE REGION, 1984

County	Total County Acreage	Total Acreage In Farmland	Percent of Farmland	of Farmland		
				Percent Crop- land	Percent Forest- land	Percent Other Agricultural
Citrus	402,560	263,075	65.4	22	61	17
Hernando	305,280	75,000	24.6	49	24	27
Levy	704,000	684,000	97.2	20	67	13
Marion	1,030,400	585,000	56.8	25	48	27
Sumter	359,040	338,426	94.3	44	40	16
Region	2,801,280	1,945,501	69.5	32 ¹	48 ¹	20 ¹
Florida	34,660,480	24,125,748	69.6	29	51	20

1 - Regional average

Source: University of Florida, 1987.

TABLE 12

VALUE OF VEGETABLE CROPS IN THE WITHLACOCHEE REGION, 1984-85

Vegetable	County	Acres Harvested	Yield per Acre (Bushel)	Estimated Value
Cucumber	Sumter	300	290	\$ 620,310 ³
Peppers	Sumter	900	385	2,283,435 ⁴
Squash	Sumter	200	176	387,200 ⁵
Tomatoes	Sumter	2,400	1,100 ¹	15,180,000 ⁶
	Marion	100	1,100	632,500
Watermelon	Citrus	800	190 ²	904,400 ⁷
	Hernando	200	190	226,100
	Levy	4,300	140	3,581,900
	Marion	3,000	140	2,499,000
	Sumter	1,900	190	2,147,950

- 1 - Tomato yield in cartons
 2 - Watermelon yield in hundred weight
 3 - Calculated at \$7.13 per bushel
 4 - Calculated at \$6.59 per bushel
 5 - Calculated at \$11.00 per bushel
 6 - Calculated at \$5.75 per carton (fresh value)
 7 - Calculated at \$5.95 per hundred weight

Sources: Florida Crop and Livestock Reporting Service, 1986.
 Withlacoochee Regional Planning Council, 1987.

TABLE 13

FIELD CROP VALUE IN THE WITHLACOCHEE REGION, 1985

Field Crop	County	Acres Planted	Acres Harvested	Yield Per Acres (Bushels)	Estimated Value
Corn	Marion Levy	5,000 5,500	2,000 3,000	70 74	\$ 357,000 ³ 566,100
Soybeans	Marion Levy	200 4,000	200 3,500	24 22	24,960 ⁴ 400,400
Peanuts	Marion Levy	- ¹ -	*6,000 3,300	2,340 ² 3,470	3,229,200 ⁵ 2,633,730
Tobacco	Levy Marion & Sumter	- -	50 20	2,400 ² 1,000	205,200 ⁶ 34,200
Sorghum	Marion	-	3,000	20 ⁷	1,800,000 ⁸

- 1 - Acres planted, not recorded for peanuts or tobacco
2 - Peanut and tobacco yield in pounds per acre
3 - Corn value calculated at \$2.44 per bushel
4 - Soybean value calculated at \$5.20 per bushel
5 - Peanut value calculated at \$0.23 per pound
6 - Tobacco value calculated at \$1.71 per pound
7 - Sorghum yield in tons
8 - Sorghum value calculated at \$30 per ton
* Includes green peanuts

Sources: Florida Crop and Livestock Reporting Service, 1986.
Withlacoochee Regional Planning Council, 1987.

TABLE 14

HARVEST DATES FOR VEGETABLES AND FIELD CROPS GROWN IN THE WITHLACOCHEE REGION

	Planting Dates	Starts	Harvest Dates Most Active	Ends
<u>Vegetables</u>				
Cucumbers	Aug. 1 - Apr. 1	Sept. 20	Nov. 1 - Dec. 15 Apr. 20 - June 1	July 1
Peppers	Aug. 1 - Mar. 15	Oct. 20	Nov. 15 - June 15	July 1
Squash	Aug. 15 - Apr. 1	Sept. 1	Nov. 15 - May 15	July 1
Tomatoes	July 25 - Mar. 15	Oct. 15	Nov. 15 - June 1	July 1
Watermelons	Dec. 15 - Apr. 1	Apr. 10	May 1 - July 1	July 15
<u>Field Crops</u>				
Corn	Feb. 15 - Apr. 30	July 15	Sept. 1 - Sept. 30	Nov. 15
Peanuts	Apr. 1 - May 15	Aug. 15	May 1 - May 15	May 30
Soybeans	May 1 - July 15	Sept. 15	Oct. 1 - Oct. 31	Dec. 15
Tobacco	Mar. 1 - Apr. 15	June 15	June 1 - July 15	July 25

Source: Florida Crop and Livestock Reporting Service, 1986

TABLE 15

CITRUS ACREAGE BY TYPE OF FRUIT IN THE COUNTIES OF THE
WITHLACOCHEE REGION, 1985

County	Total Citrus Acreage	Total Orange Acreage	Potential* Value ¹	Total Grapefruit Acreage	Potential* Value ²
Citrus	250	240	\$ 478,600	2	\$ 2,606
Hernando	300	300	576,275	0	-
Marion	198	175	334,994	0	-
Sumter	62	54	103,370	8	10,424
Region	810	769	\$ 1,493,239	10	\$ 13,030
Florida	642,756	474,592	\$908,487,736	116,863	\$152,274,826

1 - Calculated using 1985 average yield per acre = 247 boxes, and the average price per box 1984-85 = \$7.75

2 - Calculated using 1985 average yield per acre = 381 boxes, and the average price per box 1984-85 = \$3.42

*This value is "potential" since most trees in the region are not yet of bearing age.

Sources: University of Florida, 1987.
Withlacoochee Regional Planning Council, 1987.

TABLE 16

DAIRY AND LIVESTOCK VALUES IN THE WITHLACOCHEE REGION

County	Number of Milk Cows	Value of Dairy Products (x 1,000)	Number of Beef Cows	Value of Cattle and Calves Sold (x 1,000)
Citrus	23	-	5,557	\$ 952
Hernando	1,798	\$3,399	10,131	10,586
Levy	199	W ¹	17,437	4,212
Marion	4,185	7,025	32,319	9,672
Sumter	1,316	2,311	36,003	9,254
Region	7,521	\$12,735 ²	101,447	34,676

1 - Information withheld to avoid disclosing data for individual farms.

2 - Part of the information making up this total not available, this information is from Census data, not the methodologies used elsewhere.

Source: U. S. Dept. of Commerce, 1984.

TABLE 17

MARKET VALUE OF AGRICULTURAL PRODUCTS
SOLD IN THE WITHLACOCHEE REGION, (VALUES IN \$1,000)

	Citrus	Hernando	Levy	Marion	Sumter	Region
<u>Crops:</u>						
- Fruits, nuts, berries	\$1,063	\$ 5,004	\$ 11	\$16,430	\$ 220	
- Nursery and greenhouse	560	107	63	3,026	368	\$ 31,756
- Other crops	3	W	3,351	1,490	W	
<u>Livestock, poultry & products</u>	3,948	22,850	5,988	52,508	15,651	100,945
- Poultry & poultry products	2,537	8,207	W	1,207	3,314	15,265*
- Dairy products	-	3,399	W	7,025	2,311	12,735*
- Cattle and calves	952	10,586	4,212	9,672	9,254	34,676
- Hogs and pigs	W	410	W	699	347	1,456*
- Sheep, lambs and wool	W	1	W	5	2	8*
<u>Other Livestock and products</u>	228	247	157	34,080 ¹	422	35,134

*Part of the data for this total not available

W-Information withheld to avoid disclosing data for individual farms

1-Marion County other livestock includes horse farming

Source: U.S. Department of Commerce, 1984.

TABLE 18
MILK PRODUCTION IN THE WITHLACOCHEE REGION

County	Number of Milk Cows	Annual Production (In thousands of lbs) ¹	Annual Value of Milk ² (X \$1,000)	Income Per Day
Hernando	1,798	19,951	327,196	896
Levy	2,300	25,521	418,541	1,147
Marion	4,185	46,437	761,567	2,087
Sumter	1,316	14,602	239,473	656
Region	9,599	106,511	1,746,777	4,786

1-Calculated using 1982 mean pounds of milk per cow per day = 30.4

2-Calculated using 1982 price for a hundred weight of milk = \$16.40

Sources: U.S. Department of Commerce, 1984.
Florida Crop Livestock Reporting Service, 1985.
County Extension Services, 1987.
Withlacoochee Regional Planning Council, 1987.

TABLE 19

FISH AND SHELLFISH LANDINGS AND VALUE FOR COUNTIES IN THE
WITHLACOCHEE REGION (1983)

County	Landings (pounds)		Total Value (Dollars)
	Total	Fish Shellfish ²	
Citrus ¹	6,718,089	2,188,919	4,529,170
Levy	3,106,115	717,721	2,388,394
Regional ¹ Total	9,824,204	2,906,640	6,917,564
Florida	177,723,409	104,514,238	73,209,171
			165,899,330

1-Includes Pasco County Values

2-Includes Shrimp

Source: University of Florida, 1987.

TABLE 20

POTENTIAL LOSSES OF THE POULTRY INDUSTRY WITHIN THE WITHLACOCHEE REGION

County	Layer Farms	Number of Layers ¹	Estimated Annual Egg Production Value ²	Potential ³ Loss (in \$1,000)		
				1 day	3 days	5 days
Citrus	51	243,882	\$ 2,489,873	\$ 6.8	\$ 20.5	\$ 34.1
Hernando	41	196,062	2,001,662	5.5	16.5	27.4
Levy	57	272,574	2,782,799	7.6	22.9	38.1
Marion*	1	100,000	1,020,933	2.8	8.4	14.0
Sumter*	3	1,000,000	11,522,250	31.6	94.7	157.8
Region	153	1,812,518	\$19,817,517	\$54.3	\$163.0	\$271.4

1-Calculated using 1982 average number of layers per farm = 4,782

2-Calculated using 1982 average annual eggs per layer = 247, and 1982 average per dozen eggs = \$0.496

3-Loss value will vary with season.

*1986 Figures, number of layers provided by Extension Services.

Sources: U.S. Department of Commerce, 1984.
Florida Crop and Livestock Reporting Service, 1986.
Withlacoochee Regional Planning Council, 1987.

TABLE 21

FARMS BY STANDARD INDUSTRIAL CLASSIFICATION IN THE WITHLACOCHEE REGION

	Citrus	Hernando	Levy	Marion	Sumter	Regional Total
Cash Grains	-	1	18	12	-	31
Field Crops	13	25	47	88	19	192
Cotton	-	-	-	-	-	-
Tobacco	-	-	4	1	2	7
Sugar, peanuts, hay, potatoes and others	13	25	43	87	17	185
Vegetables, melons	11	4	40	75	127	257
Fruits and tree nuts	43	112	7	214	29	405
Horticultural specialties	17	13	9	45	13	97
General, primarily crop	1	1	17	26	1	46
Livestock	174	254	300	689	432	1,849
Beef	143	218	245	545	399	1,550
Dairy farms	-	5	3	13	5	26
Poultry and eggs	14	22	4	9	7	56
Animal specialties	19	23	21	379 ¹	21	463
General, primarily livestock	1	3	10	7	4	25
Total Number Farms	449	706	768	2,190	1,076	5,189

¹-Marion County animal specialties include horse farms

Source: U.S. Department of Commerce, 1984.

TABLE 22
AGRICULTURAL LOSS ASSOCIATED WITH
DIFFERENT HURRICANE CATEGORIES -
CITRUS COUNTY

Loss Zone and Agricultural Practice	Value of loss for each category (X \$1,000)				
	1	2	3	4	5
<hr/>					
Poultry					
C5	\$ 23.0	47.6	155.1	441.3	1,245.0
C6	<u>21.4</u>	<u>42.8</u>	<u>139.4</u>	<u>387.9</u>	<u>1,245.0</u>
	44.4	90.4	294.5	829.2	2,490.0
Watermelon					
C5	7.3	9.2	15.7	27.9	97.0
C6	7.1	8.8	14.6	25.4	96.1
C7	<u>3.4</u>	<u>4.7</u>	<u>6.6</u>	<u>11.0</u>	<u>32.2</u>
	17.8	22.7	36.9	64.3	225.3
*Ornamental Plants					
C1	76.6	78.2	137.6	142.1	151.4
C6	263.3	265.6	273.8	524.4	573.8
C7	<u>328.6</u>	<u>333.0</u>	<u>339.5</u>	<u>652.5</u>	<u>689.7</u>
	668.5	676.8	750.9	1,319.0	1,414.9
Citrus					
C4	8.2	8.5	9.4	11.1	18.6
C5	8.2	8.4	9.3	10.9	20.1
C6	8.1	8.4	9.1	10.6	19.9
C7	<u>56.6</u>	<u>58.9</u>	<u>62.4</u>	<u>70.7</u>	<u>110.1</u>
	81.1	84.2	90.2	103.3	168.7
Deciduous Fruits					
C4	1.0	1.3	2.2	3.9	11.4
C6	0.5	0.6	1.0	1.7	6.4
C7	<u>0.9</u>	<u>1.2</u>	<u>1.7</u>	<u>2.9</u>	<u>8.6</u>
	2.4	3.1	4.9	8.5	26.4
Total Loss	<u>814.2</u>	<u>877.2</u>	<u>1,177.4</u>	<u>2,324.3</u>	<u>4,325.4</u>

*Forty percent are woody ornamentals not grown in greenhouses.
Twenty percent are grown in plastic greenhouses, destroyed at 70
miles per hour.

Sources: Withlacoochee Regional Planning Council, 1987.
Citrus County Extension Service, 1987.

TABLE 23

AGRICULTURAL LOSS ASSOCIATED WITH
DIFFERENT HURRICANE CATEGORIES -
HERNANDO COUNTY

Loss Zone and Agricultural Practice	Value of loss for each category (X \$1,000)				
	1	2	3	4	5
Poultry					
H4	6.0	12.4	40.5	116.8	300.0
H5	12.5	24.7	80.4	225.1	701.0
H6	9.5	18.0	58.3	157.4	600.0
H7	5.7	10.8	32.6	50.9	400.0
	33.7	65.9	211.8	550.2	2,001.0
Watermelon					
H5	3.2	4.8	6.5	11.3	32.3
H6	1.3	1.6	2.5	4.3	12.4
	4.5	6.4	9.0	15.6	44.7
Hay					
H4	0.4	0.5	0.9	1.7	4.7
H5	1.8	2.7	3.7	6.5	18.4
H6	1.5	1.8	2.9	5.0	14.6
H7	0.2	0.2	0.4	0.6	1.6
	3.9	5.2	7.9	13.8	39.3
*Ornamental Plants					
H1	a	a	a	a	a
H3	a	a	a	a	a
H4	0.2	0.3	0.5	0.9	2.6
H5	41.9	43.5	44.4	48.0	63.7
H6	0.9	1.0	1.3	1.9	4.6
H7	1.8	1.8	2.3	2.6	4.9
	44.8	46.6	48.5	53.4	129.2
Citrus					
H5	4.7	5.2	5.5	6.4	10.3
H6	92.5	94.6	102.2	116.2	181.7
	97.2	99.8	107.7	122.6	192.0
Total Loss	<u>184.1</u>	<u>223.9</u>	<u>384.9</u>	<u>896.0</u>	<u>2,396.2</u>

*All ornamental plants are grown outside, except 25% in H5, 2% in H6 and 6% in H7, that are grown in greenhouses destroyed at 70 miles per hour.

a - Less than \$100 loss, not included in total loss.

Sources: Withlacoochee Regional Planning Council, 1987.
Hernando County Extension Service, 1987.

TABLE 24
AGRICULTURAL LOSS ASSOCIATED WITH
DIFFERENT HURRICANE CATEGORIES -
LEVY COUNTY

Loss Zone and Agricultural Practice	Value of loss for each category (X \$1,000)				
	1	2	3	4	5
Poultry					
L5	16.9	33.6	109.2	302.0	1,000.0
L7	<u>15.1</u>	<u>28.4</u>	<u>88.3</u>	<u>235.0</u>	<u>1,000.0</u>
	32.0	62.0	197.5	537.0	2,000.0
Watermelon					
L4	5.8	8.9	12.5	22.2	60.1
L5	17.1	21.6	35.5	61.5	167.6
L6	18.4	22.2	38.4	66.5	181.1
L7	<u>26.8</u>	<u>32.4</u>	<u>49.8</u>	<u>100.8</u>	<u>232.6</u>
	68.1	85.1	136.2	251.0	641.4
Corn					
L4	0.8	1.2	1.7	3.1	8.3
L5	1.2	1.5	2.5	4.3	11.6
L6	1.0	1.2	2.0	3.5	9.6
L7	<u>7.7</u>	<u>9.3</u>	<u>14.4</u>	<u>29.1</u>	<u>67.1</u>
	10.7	13.2	20.6	40.0	96.6
Soybeans					
L5	1.1	1.3	2.2	3.9	10.5
L6	0.7	0.9	1.6	2.8	7.5
L7	<u>5.7</u>	<u>6.9</u>	<u>10.6</u>	<u>21.4</u>	<u>49.4</u>
	7.5	9.1	14.4	28.1	67.4
Peanuts					
L5	21.1	26.0	42.9	74.2	202.1
L6	9.5	11.5	19.9	34.4	93.6
L7	<u>19.7</u>	<u>23.8</u>	<u>36.6</u>	<u>74.1</u>	<u>171.0</u>
	50.3	61.3	99.4	182.7	466.7
Tobacco					
L7	3.8	4.6	7.1	14.4	33.3
Total Loss					
	<u>172.4</u>	<u>235.3</u>	<u>475.2</u>	<u>1,053.2</u>	<u>3,305.4</u>

Ornamental Plants are grown in Levy County, although annual yield information was not available.

Sources: Withlacoochee Regional Planning Council, 1987.
Levy County Extension Service, 1987.

TABLE 25

AGRICULTURAL LOSS ASSOCIATED WITH
DIFFERENT HURRICANE CATEGORIES -
MARION COUNTY

Loss Zone and Agricultural Practice	Value of loss for each category (X \$1,000)				
	1	2	3	4	5
Poultry	17.2	34.3	111.5	308.4	1,021.0
Watermelon					
M2	4.7	5.7	8.9	15.0	41.8
M3	11.4	13.8	21.3	34.7	92.8
M4	11.1	13.5	20.1	32.7	83.1
M5	10.6	12.8	19.0	29.4	57.0
M6	6.1	7.3	10.3	14.9	34.2
	43.9	53.1	79.6	126.7	308.9
Tomatoes					
M5	10.7	13.0	19.1	29.8	57.7
Ornamental Plants					
M3	916.4	919.9	925.3	1,800.0	1,800.0
M5	381.4	382.7	386.3	750.0	750.0
M6	228.6	229.4	231.2	234.0	450.0
	1,526.4	1,532.0	1,542.8	2,784.0	1,704.0
Citrus					
M6	55.3	56.6	59.3	63.4	80.6
Sorgum					
M4	12.8	15.5	23.1	37.6	95.7
M5	14.4	22.2	40.1	50.8	98.6
	27.2	37.7	63.2	88.4	194.3
Corn					
M5	7.1	7.3	13.3	16.8	32.6
Soybeans					
M4	0.4	0.5	0.8	1.3	3.2

TABLE 25 CONTINUED

Peanuts					
M1	15.8	19.4	32.0	55.5	151.1
M2	15.2	18.4	28.9	48.6	135.5
M4	5.7	7.0	10.4	16.9	42.9
M5	<u>25.8</u>	<u>26.6</u>	<u>48.0</u>	<u>60.7</u>	<u>117.9</u>
	62.5	71.4	119.3	181.7	447.4
Tobacco					
M2	2.4	4.3	6.7	11.3	31.6
Total Loss					
	<u>1,753.0</u>	<u>1,810.2</u>	<u>2,015.6</u>	<u>3,611.8</u>	<u>3,881.3</u>

*Half are grown outside and half in plastic greenhouses, destroyed at 70 miles per hour.

Sources: Withlacoochee Regional Planning Council, 1987.
Marion County Extension Service, 1987.

TABLE 26

AGRICULTURAL LOSS ASSOCIATED WITH
DIFFERENT HURRICANE CATEGORIES -
SUMTER COUNTY

Agricultural Practice	Value of loss for each category (X \$1,000)				
	1	2	3	4	5
Poultry					
S2	54.1	102.3	308.9	821.8	3,840.0
S3	<u>95.3</u>	<u>178.8</u>	<u>529.3</u>	<u>1,344.4</u>	<u>6,652.1</u>
	149.4	281.1	838.2	2,166.2	10,492.1
Vegetable Crops					
S3	101.3	122.7	183.1	294.7	786.0
Watermelon					
S2	2.0	2.4	3.0	6.0	17.3
S3	<u>35.9</u>	<u>43.5</u>	<u>64.7</u>	<u>104.5</u>	<u>279.1</u>
	37.9	45.9	67.7	110.5	296.4
Hay					
S2	2.9	3.5	4.4	8.8	24.9
S3	<u>89.6</u>	<u>108.6</u>	<u>161.4</u>	<u>260.8</u>	<u>696.6</u>
	92.5	112.1	165.8	269.6	721.5
*Ornamental Plants					
S2	1.1	1.3	1.7	3.4	9.6
S3	<u>38.5</u>	<u>46.7</u>	<u>69.4</u>	<u>112.1</u>	<u>299.4</u>
	39.6	48.0	71.1	115.5	309.0
Citrus					
S2	6.2	6.4	6.6	7.6	11.4
S3	<u>12.9</u>	<u>13.2</u>	<u>14.0</u>	<u>15.5</u>	<u>22.1</u>
	19.1	19.6	20.6	23.1	33.5
Total Loss	<u>439.8</u>	<u>629.4</u>	<u>1,346.5</u>	<u>2,979.6</u>	<u>12,638.5</u>

*Plants are woody ornamentals not grown in greenhouses.

Sources: Withlacoochee Regional Planning Council, 1987.
Sumter County Extension Service, 1987.

TABLE 27

FOREST PRODUCTS OF COUNTIES WITHIN THE WITHLACOCHEE REGION
1986 (in thousands of dollars)

County	Stumpage Value of Harvest	Logging Value Added	Primary Manufactured Value Added ¹	Wholesale Manufactured Value Added ²	Secondary Manufactured Value Added ³	Transportation and Marketing Value Added	Total Forest Products Income
Citrus	\$ 181	290	4	475	15,478	13,653	29,605
Hernando	13	33	132	178	12,587	11,102	23,866
Levy	4,778	4,827	253	9,858	5,618	4,956	20,432
Marion	3,633	3,105	4,945	11,683	34,647	30,560	76,891
Sumter	238	415	0	653	6,858	6,049	13,560
Region	\$ 8,843	8,670	5,334	22,846	75,188	66,319	164,353
Florida	\$177,200	139,658	1,407,561	1,724,419	2,754,230	2,429,358	6,908,007

1-Includes sawmills, plywood and veneer mills, pulp mills, gum and wood chemicals.

2-Summation of first three columns.

3-Includes mill work, mobile homes, paper coating and glazing, sanitary food containers, tire cord and fabric, plastic materials, resins and wood preserving.

Source: Department of Agriculture and Consumer Services, 1985.

TABLE 28

TIMBER LOSSES ASSOCIATED WITH DIFFERENT
HURRICANE CATEGORIES - WITHLACOOCHEE REGION

County/ Loss Zone	Value of loss for each category (X \$1,000)				
	1	2	3	4	5
Citrus					
C1	3.4	3.7	4.1	5.3	15.6
C5	3.3	3.7	4.0	4.3	8.0
C6	8.0	9.1	10.0	10.7	22.0
C7	1.6	1.8	2.0	2.1	3.8
Hernando					
H1	0.1	0.1	0.2	0.3	0.8
H2	a	a	a	0.1	0.2
H3	a	a	a	0.1	0.2
H4	a	a	a	0.1	0.4
H5	a	a	a	0.1	0.2
H6	a	a	0.1	0.1	0.4
H7	a	a	0.1	0.1	0.4
H8	a	a	a	0.1	0.2
Levy					
L1	25.1	28.4	51.0	94.8	264.2
L2	5.0	6.6	11.7	21.4	59.5
L3	10.0	13.0	22.8	41.4	114.5
L4	42.4	53.8	91.7	162.9	439.9
L5	13.1	16.1	26.6	46.0	125.3
L7	5.4	6.5	10.0	13.3	46.6
Marion					
M1	3.5	4.4	7.1	12.5	34.0
M2	3.4	4.1	6.5	10.9	30.5
M3	6.6	8.0	12.1	20.2	53.9
M4	1.3	1.6	2.3	3.8	9.7
M5	15.4	18.7	27.4	42.8	98.6
M6	21.5	26.8	38.0	55.0	126.0
M7	7.9	10.0	13.7	18.5	43.8
Sumter					
S1	0.4	0.5	0.5	0.6	0.9
S2	6.6	7.6	8.4	9.0	13.6
S3	12.7	14.6	16.4	17.5	20.9
Total Loss	<u>196.7</u>	<u>239.1</u>	<u>366.7</u>	<u>594.0</u>	<u>1,534.1</u>

a - Less than \$100 loss, not included in total loss.

Sources: County Foresters, 1987.
Withlacoochee Regional Planning Council, 1987.

CHAPTER 4
HAZARDOUS MATERIALS INVENTORY

HAZARDOUS MATERIALS INVENTORY

In the event of a hurricane strike to the Withlacoochee region, strong winds and high tides may be combined with the release of hazardous wastes to compound the problems. Therefore, a comprehensive inventory of the locations of stored hazardous materials and wastes is a vital tool in preparation for hazard mitigation.

Nationally, over 290 million tons of hazardous wastes are produced annually, with the chemical and petroleum industries being the largest producers. The State of Florida utilizes the Environmental Protection Agency's (EPA) definition of hazardous materials, as all substances that pose a threat to human health or the environment. Hazardous materials are characterized as either corrosive, reactive, ignitable, toxic or a combination of one or more than one of these properties. Substances that cause either serious irreversible incapacitating or reversible illnesses are also classified as hazardous materials. Hazardous materials with these qualities can become hazardous wastes if improperly managed in such a fashion that they present a potential threat to human health or the environment. Hazardous materials will become hazardous wastes, for example, if inadvertently spilled during a hurricane event.

Establishments that store or utilize over 1000 kilograms (2200 pounds) of hazardous substances each month are categorized as large quantity generators. Small quantity generators are those that fall below this threshold. Examples of small quantity generators include printshops, funeral homes, auto mechanic shops and photographic shops. Small quantity generators are regulated by the Florida Department of Environmental Regulation (DER) and EPA regulates large quantity generators. DER administers its own hazardous waste program. The Water Quality Assurance Act of 1983 as defined by Florida Statutes Section 403.7234, "Small quantity generator notification program," enables DER to conduct a hazard analysis of businesses to identify the nature, type, and quantity of hazardous waste generated or stored on its premises and its current method of disposal.

HAZARDOUS MATERIALS

The Federal Resource Conservation and Recovery Act (RCRA) of 1976 requires any person who generates or transports hazardous materials to notify the EPA. The EPA provided the list of businesses in the region that store hazardous materials (Appendix F). The lack of enforcement of RCRA is shown by the small number of notifiers. It is assumed for this study that establishments in counties other than Sumter do treat, store or dispose of hazardous materials. Federal regulation under Title III, The Emergency Planning and Community Right-to-know Act of 1986 specifies that the State of Florida requires persons who store hazardous materials to inform their local fire officials of hazardous substances present at their facility.

Hazardous Waste

Large quantity hazardous waste generators, as identified by the Florida Department of Environmental Regulation, are shown in Figure 1. Table 29 details each of the large quantity hazardous waste generators. Besides large quantity generators, the Withlacoochee Regional Planning Council's Hazardous Waste Assessment (1986) also detailed concentrations of small quantity hazardous waste generators. The only coastal area identified with small quantity generators is in Loss Zone C1 at Crystal River. Zones C7, H4, H5 and L6 are identified as having the highest numbers of small quantity hazardous waste generators in the coastal counties, whereas zones M4, M5 and S3 are the most concentrated for inland counties.

Hazardous waste releases present serious environmental impacts because spills may go unnoticed, allowing hazardous substances to contaminate air, land and water resources. Hazardous substances may enter sewage systems and pass through water treatment facilities or may infiltrate directly into the aquifer. Spills of hazardous substances may not be immediately noticed, especially in the aftermath of a hurricane strike. If the spill is associated with water, dispersion will be rapid and over a large area. Aquifer contamination is a serious problem, since clean-up is extremely difficult and costly. Aquifers may hold pollutants for hundreds of thousands of years, continually dispersing the contaminant. With 90 percent of Florida's population dependent upon groundwater from private or public well fields, hazardous waste releases are particularly serious. Inventories of large quantity hazardous materials storage facilities throughout the region should be continually updated.

TABLE 29
LARGE QUANTITY HAZARDOUS WASTE
GENERATORS IN THE WITHLACOOCHEE REGION

Facility Name	Location	County ID #	Loss Zone
<u>Citrus County</u>			
Advanced Circuit Technology, Inc.	Crystal River	Citrus, 1	C1
Armor Transmissions	Inverness	Citrus, 2	C7
Bicker's Tire & 4 Wheel Drive	Inverness	Citrus, 3	C6
Brown's C.D.P., Inc.	Inverness	Citrus, 4	C6
Citrus Tire & Automotive Center	Inverness	Citrus, 5	C6
Crystal Chevrolet	Crystal River	Citrus, 6	C1
Crystal River Firestone	Crystal River	Citrus, 7	C1
Dimmitt, Larry Toyota, Inc.	Inverness	Citrus, 8	C6
Ed's Auto Repair and Towing	Inverness	Citrus, 9	C6
Florida Power Corp.	Crystal River	Citrus, 10	C1
Homosassa Tire	Homosassa Springs	Citrus, 11	C1
King Bay Auto	Crystal River	Citrus, 12	C1
Manatee Dry Cleaners	Inverness	Citrus, 13	C7

TABLE 29 CONTINUED

LARGE QUANTITY HAZARDOUS WASTE
GENERATORS IN THE WITHLACOOCHEE REGION

Facility Name	Location	County ID #	Loss Zone
<u>Citrus County (Continued)</u>			
Nick Nicholas Ford, Inc.	Inverness	Citrus, 14	C6
Nick Nicholas Ford, Inc.	Crystal River	Citrus, 15	C1
Steves Auto Repair	Inverness	Citrus, 16	C6
Suncoast Lincoln Mercury	Crystal River	Citrus, 17	C1
Sunset Oldsmobile	Homosassa	Citrus, 18	C1
Three M Auto Service	Inverness	Citrus, 19	C7
<u>Hernando County</u>			
Atlas Powder Company	Brooksville	Hernando, 1	H5
Brooksville Chevron	Brooksville	Hernando, 2	H5
Classic Car Rebuilders, Inc.	Brooksville	Hernando, 3	H5
Don Olson Firestone	Spring Hill	Hernando, 4	H3
Don Olson Firestone	Brooksville	Hernando, 5	H5
Florida Crushed Stone	Brooksville	Hernando, 6	H5
Hilltop Chevron	Brooksville	Hernando, 7	H5
Ken's Springhill Service Center	Spring Hill	Hernando, 8	H4

TABLE 29 CONTINUED

LARGE QUANTITY HAZARDOUS WASTE
GENERATORS IN THE WITHLACOOCHEE REGION

Facility Name	Location	County ID #	Loss Zone
<u>Hernando County (Continued)</u>			
Mike's Yamaha	Brooksville	Hernando, 9	H5
Naughton, John Ford	Spring Hill	Hernando, 10	H4
Randy's Hilltop Gulf	Brooksville	Hernando, 11	H5
Register Chevy & Olds, Inc.	Brooksville	Hernando, 12	H5
Seaboard System Railroad Company	Brooksville	Hernando, 13	H5
Southern Bell	Brooksville	Hernando, 14	H5
Sparton Electronics Inc.	Brooksville	Hernando, 15	H6
Touch of Class	Spring Hill	Hernando, 16	H3
Washing Well	Spring Hill	Hernando, 17	H3
Wes Harris Buick Pontiac G.M.C.	Brooksville	Hernando, 18	H5
<u>Levy County</u>			
Florida DOT	Chiefland	Levy, 1	L7
Florida Rock Industries, Inc.	Gulf Hammock	Levy, 2	L3
Scoggins Chevrolet Olds, Inc.	Chiefland	Levy, 3	L7
U. S. Coast Guard	Yankeetown	Levy, 4	L1
White Ford Co.	Chiefland	Levy, 5	L7
<u>Marion County</u>			
Aamco Transmission	Ocala	Marion, 1	M5

Table 29 CONTINUED

LARGE QUANTITY HAZARDOUS WASTE
GENERATORS IN THE WITHLACOOCHEE REGION

Facility Name	Location	County ID #	Loss Zone
<u>Marion County (Continued)</u>			
Alumax Building Products, Inc.	Ocala	Marion, 2	M5
Auto Haus of Ocala	Ocala	Marion, 3	M5
Bay's One Hour Cleaners	Ocala	Marion, 4	M5
Bay's One Hour Cleaners	Ocala	Marion, 5	M5
Bay's One Hour Cleaners	Ocala	Marion, 6	M5
Boebinger Inter- national Trucks Sales	Ocala	Marion, 7	M5
Boutwell Construction Company	Ocala	Marion, 8	M5
Case Power and Equipment Co.	Ocala	Marion, 9	M5
Chese Dry Clearner	Ocala	Marion, 10	M5
Clairson Industries	Ocala	Marion, 11	M5
Classic Cleaners	Ocala	Marion, 12	M5
Classic Cleaners	Ocala	Marion, 13	M5
D-A Lubricant Co. Inc.	Ocala	Marion, 14	M5
Dayco Corp.	Ocala	Marion, 15	M5
Delta Laboratories	Ocala	Marion, 16	M5
Gator's One Hour Cleaners	Ocala	Marion, 17	M5

TABLE 29 CONTINUED

LARGE QUANTITY HAZARDOUS WASTE
GENERATORS IN THE WITHLACOOCHEE REGION

Facility Name	Location	County ID #	Loss Zone
<u>Marion County (Continued)</u>			
Gators Cleaners	Ocala	Marion, 18	M5
Holman's Garage	Dunnellon	Marion, 19	M1
Liles Custom Paint and Body Shop	Ocala	Marion, 20	M1
Marion Community Hospital, Inc.	Ocala	Marion, 21	M5
Mark III Industries	Ocala	Marion, 22	M5
Mark III Industries	Ocala	Marion, 23	M5
Martin Marietta Aerospace	Ocala	Marion, 24	M4
Ocala Lincoln Mercury	Ocala	Marion, 25	M5
Ocala Nissan, AMC, Jeep	Ocala	Marion, 26	M4
Ocala Motors, Inc.	Ocala	Marion, 27	M5
Ocala Operations, Inc.	Ocala	Marion, 28	M5
Olson, Don Firestone	Ocala	Marion, 29	M5
One Hour Fabricare	Belleview	Marion, 30	M5
P & M Auto Repair	Ocala	Marion, 31	M5
Paddock Park Cleaners	Ocala	Marion, 32	M5
Pall Pneumatic Products, Corp.	Ocala	Marion, 33	M4
Rally Motors	Ocala	Marion, 34	M4
Ring Power Corp.	Ocala	Marion, 35	M4

TABLE 29 CONTINUED

LARGE QUANTITY HAZARDOUS WASTE
GENERATORS IN THE WITHLACOOCHEE REGION

Facility Name	Location	County ID #	Loss Zone
<u>Marion County (Continued)</u>			
Seaboard System Railroad Company	Ocala	Marion, 36	M4
Sears & Roebuck	Ocala	Marion, 37	M5
Southern Coach, Inc.	Ocala	Marion, 38	M5
Vue-All, Inc.	Ocala	Marion, 39	M5
Wayne's One Hour Cleaners	Ocala	Marion, 40	M5
Wayne's One Hour Cleaners	Ocala	Marion, 41	M5
<u>Sumter County</u>			
Armco, Inc	Wildwood	Sumter, 1	S3
Bushnell Electronics Manufacturing Bushnell	Bushnell	Sumter, 2	S3
Ferro Corp.	Wildwood	Sumter, 3	S3
Royal Palm Ice Company	Wildwood	Sumter, 4	S3
Seaboard System Railroad Company	Wildwood	Sumter, 5	S3
Seaboard System Railroad Company	Center Hill	Sumter, 6	S3
Silver Lake Packers, Inc.	Tarrytown	Sumter, 7	S3
Strickland Motor Sales, Inc.	Wildwood	Sumter, 8	S3
Sumter Electric Corp.	Sumterville	Sumter, 9	S3

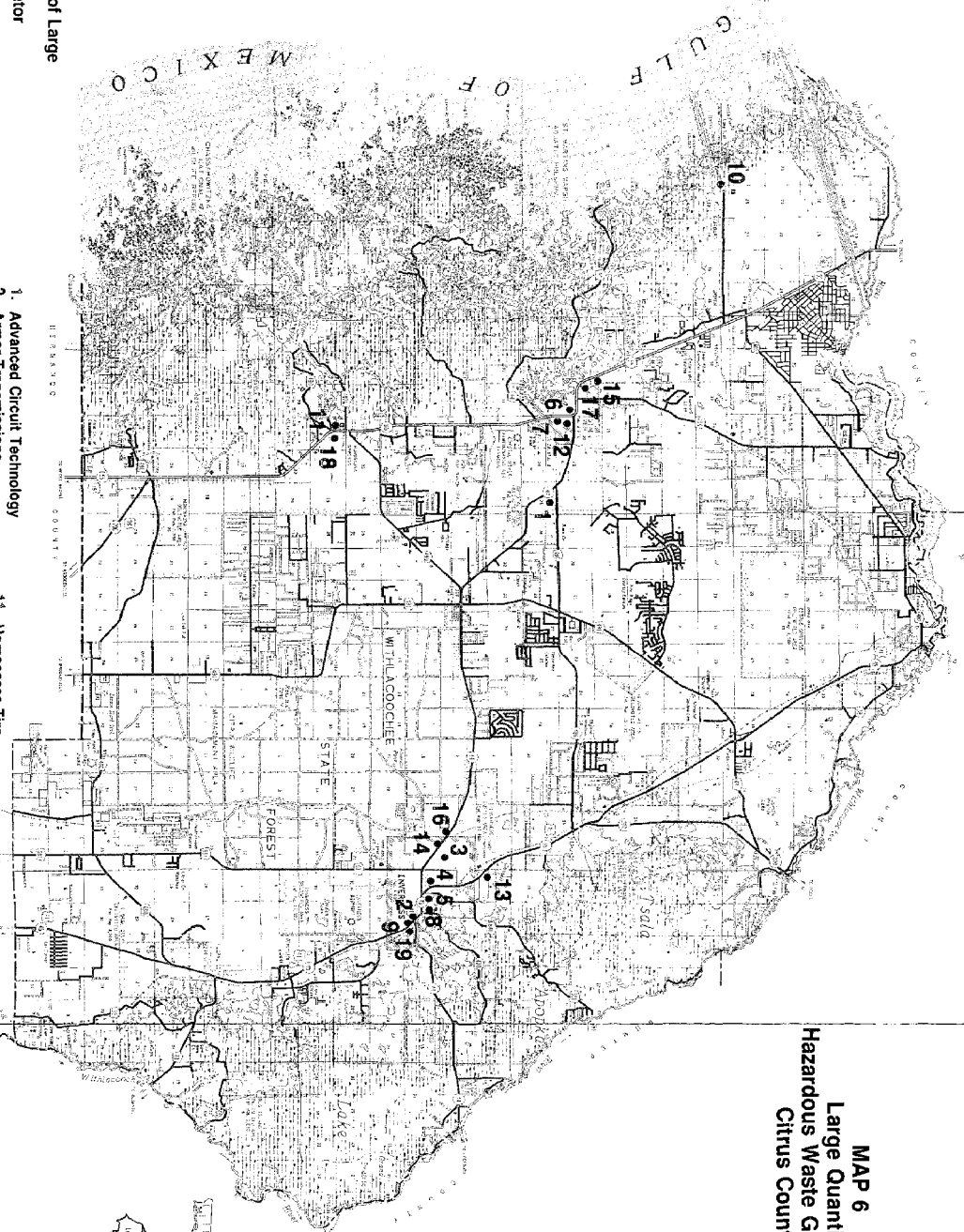
Table 29 CONTINUED

LARGE QUANTITY HAZARDOUS WASTE
GENERATORS IN THE WITHLACOOCHEE REGION

Facility Name	Location	County ID #	Loss Zone
<u>Sumter County (Continued)</u>			
Sumter Motor Company	Wildwood	Sumter, 10	S3
Wildwood Quality Cleaners	Wildwood	Sumter, 11	S3
Wildwood Trucker's Paradise	Wildwood	Sumter, 12	S3

Source: Department of Environmental Regulation, Tampa.
Groundwater Management System GMS06, 1987.
Withlacoochee Regional Planning Council, 1987.

MAP 6 **Large Quantity** **Hazardous Waste Generators** **Citrus County**



KEY:

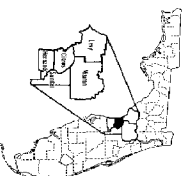
- General Location of Large Quantity Generator

SOURCES: Florida Department of Environmental Regulation, Tampa, 1987.

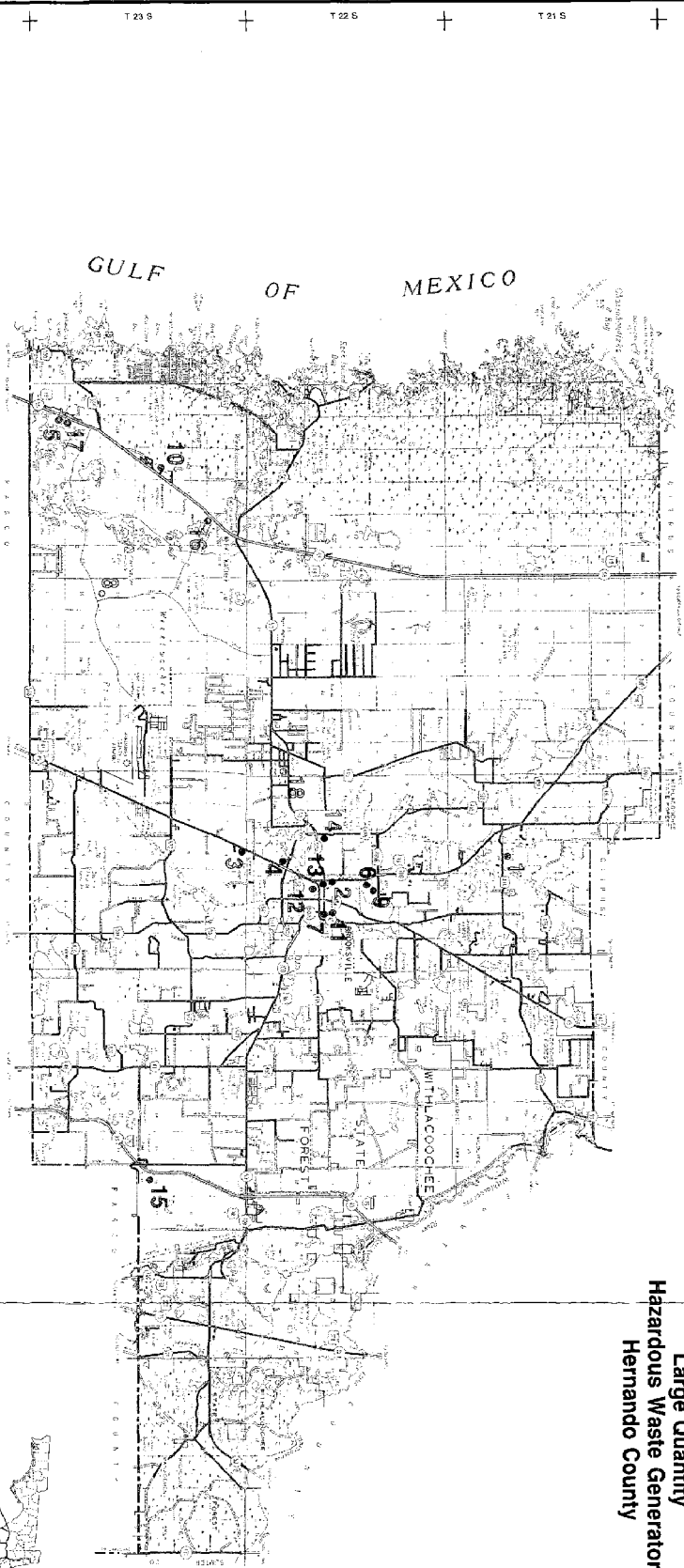
Base map prepared by the
 Florida Department of
 Transportation, Tallahassee, 1987.
 Graphics and information prepared by the
 Withlacoochee Regional Planning Council, 1987.

1. Advanced Circuit Technology
2. Arnor Transmissions
3. Bicker's Fire and 4 Wheel Drive
4. Browns C.D.P., Inc.
5. Citrus Tire and Automotive Center
6. Crystal Chevrolet
7. Crystal River Firestone
8. Larry Dimmitt Toyota, Inc.
9. Ed's Auto Repair
10. Florida Power Corporation
11. Homosassa Tire
12. King's Bay Auto
13. Manatee Dry Cleaners
14. Nick Nicholas Ford, Inc.
15. Nick Nicholas
16. Steve's Auto Repair
17. Suncoast Lincoln Mercury
18. Sunset Oldsmobile
19. Three M Auto Service

CITRUS COUNTY
FLORIDA



MAP 7 **Large Quantity** **Hazardous Waste Generators** **Hernando County**



KEY:

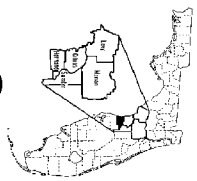
- General Location of Large Quantity Generator

SOURCES: Florida Department of Environmental Regulation, Tampa, 1987.
 Withlacoochee Regional Planning Council, 1987.

Base map prepared by the
 Florida Department of Transportation
 General Services Administration
 Withlacoochee Regional Planning Council

- | | |
|--------------------------------------|---------------------------------------|
| 1. Atlas Powder Company | 15. Touch of Class |
| 2. Brooksville Chevron | 17. Washing Well |
| 3. Classic Car Rebuilders | 18. Wes Harris Buick, Pontiac, A.M.C. |
| 4. Don Olson Firestone (Brooksville) | |
| 5. Don Olson Firestone (Spring Hill) | |
| 6. Florida Crushed Stone | |
| 7. Hilltop Chevron | |
| 8. Ken's Springhill Service Center | |
| 9. Mike's Yamaha | |
| 10. John Naughton Ford | |
| 11. Randy's Hilltop Gulf | |
| 12. Register Chevy and Olds, Inc. | |
| 13. Seaboard System Railroad Company | |
| 14. Southern Bell | |
| 15. Spartan Electronics | |

HERNANDO COUNTY
 FLORIDA



MAP 8 **Large Quantity** **Hazardous Waste Generators** **Levy County**

KEY:

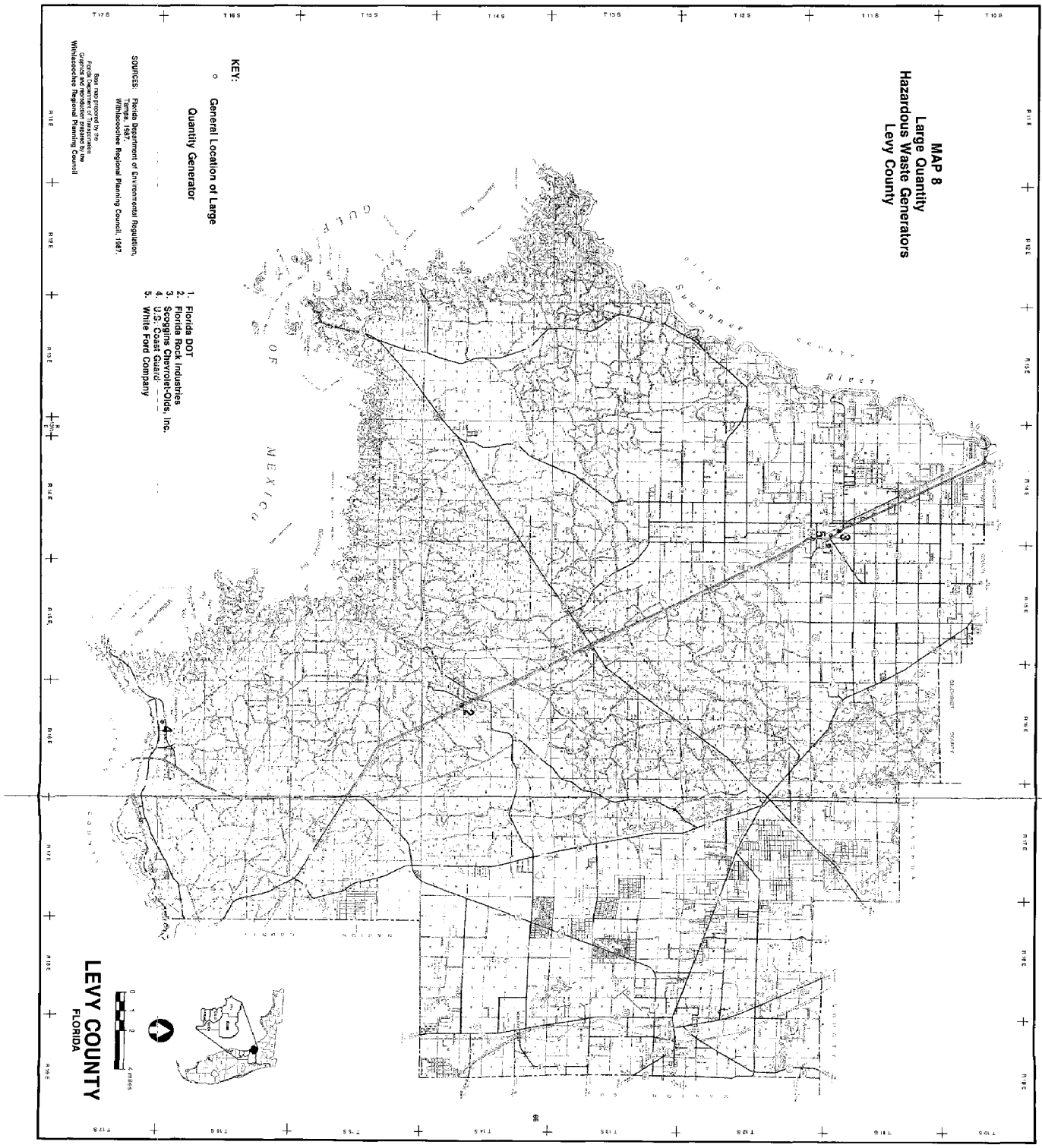
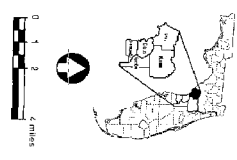
- General Location of Large Quantity Generator

1. Florida DOT
2. Florida Rock Industries
3. Scoggins Chevrolet-Olds, Inc.
4. J.C. Case Corp.
5. White Ford Company

SOURCES: Florida Department of Environmental Regulation, Tampa, 1987.
 Withlacoochee Regional Planning Council, 1987.

Map was prepared by:
 Florida Department of Transportation
 Office of Hazardous Waste Management
 Withlacoochee Regional Planning Council

LEVY COUNTY
FLORIDA



MAP 9 **Large Quantity** **Hazardous Waste Generators** **Marion County**

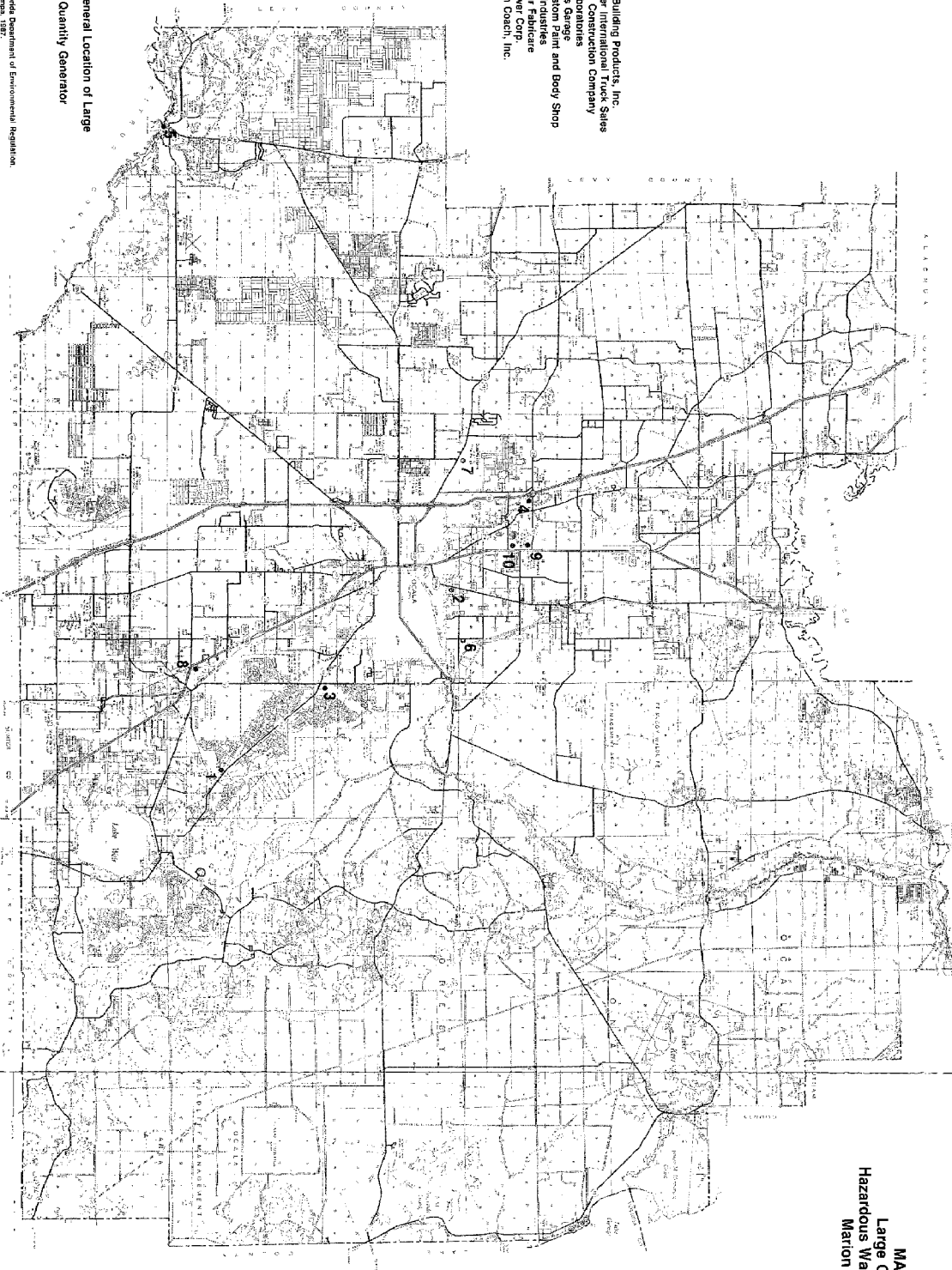
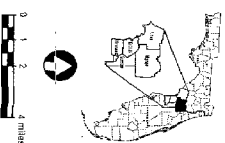
1. Aluma's Building Products, Inc.
2. Boehringer International Truck Sales
3. Bouwell Construction Company
4. Delta Laboratories
5. Holman's Garage
6. Liles Custom Paint and Body Shop
7. Mark II Industries
8. On the Border
9. Ring Power Corp.
10. Southern Coach, Inc.

KEY:
 • General Location of Large Quantity Generator

SOURCES: Florida Department of Environmental Regulation
 Tampa, 1987.
 Withalcooke Regional Planning Council, 1987.
Note: City of Ocala shown separately on Map 10.

This map prepared by the
 Florida Department of Transportation
 Graphics and cartography prepared by the
 Withalcooke Regional Planning Council

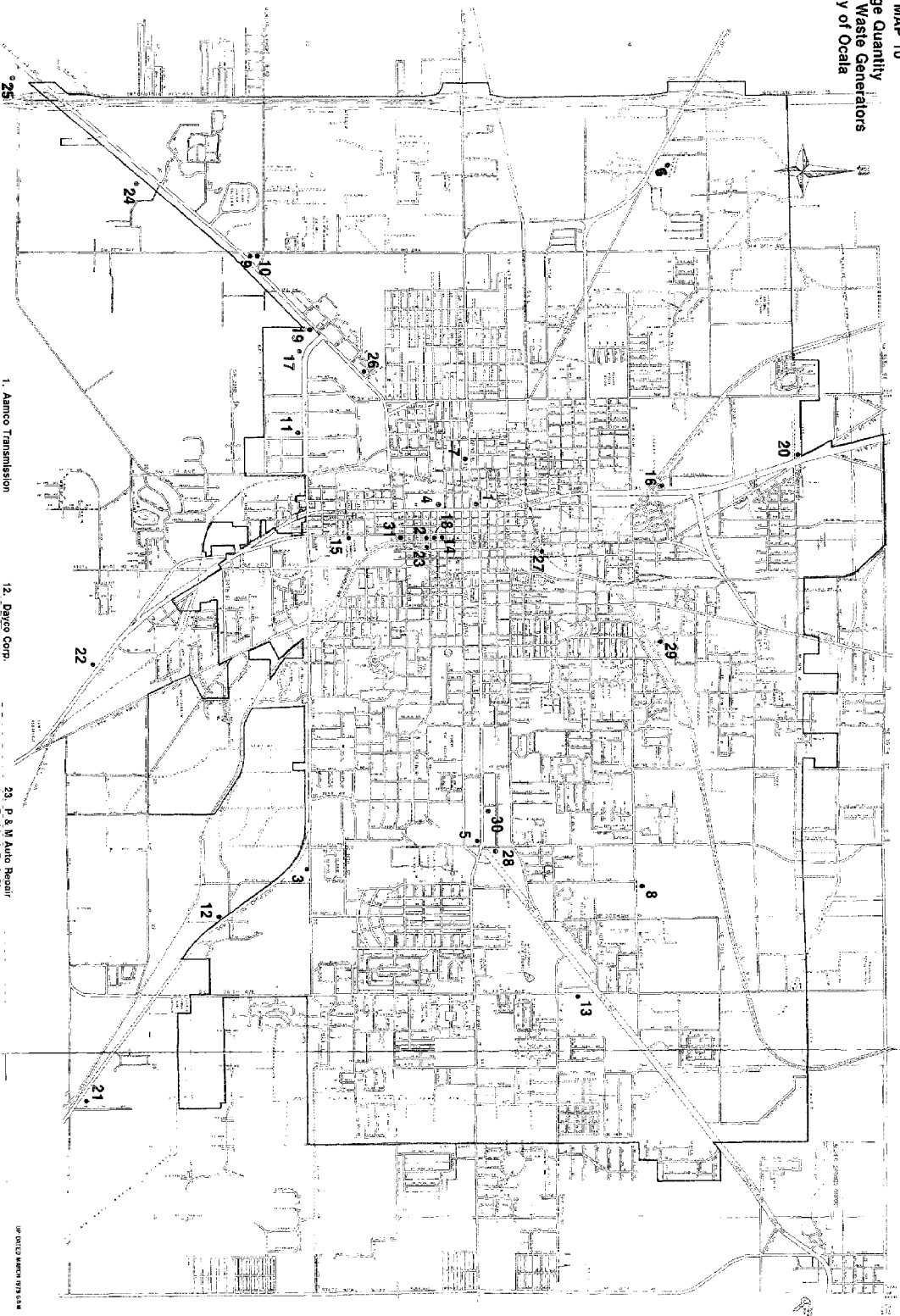
MARION COUNTY
FLORIDA



CITY OF OCALA

FLORIDA

MAP 10
Large Quantity
Hazardous Waste Generators
City of Ocala



KEY:

General location of Large

Quantity Generator

SOURCES:

Florida Department of Environmental Regulation,
Division of Environmental Assessment and Planning, 1978.
Wilkes-Barre Regional Planning Council, 1987.

1. Amco Transmission
2. Auto Haus of Ocala
3. Bay's One Hour Cleaners
4. Bay's One Hour Cleaners
5. Bay's One Hour Cleaners
6. Bay's One Hour Cleaners
7. Bay's One Hour Cleaners
8. Bay's One Hour Cleaners
9. Bay's One Hour Cleaners
10. Bay's One Hour Cleaners
11. D-A Lubricant Co., Inc.
12. Dayco Corp.
13. Gator's One Hour Cleaners
14. Gator's One Hour Cleaners
15. Gator's One Hour Cleaners
16. Gator's One Hour Cleaners
17. Gator's One Hour Cleaners
18. Gator's One Hour Cleaners
19. Gator's One Hour Cleaners
20. Gator's One Hour Cleaners
21. Gator's One Hour Cleaners
22. Gator's One Hour Cleaners
23. P & M Auto Repair
24. Padlock Park Cleaners
25. Padlock Park Cleaners
26. Padlock Park Cleaners
27. Padlock Park Cleaners
28. Padlock Park Cleaners
29. Padlock Park Cleaners
30. Padlock Park Cleaners
31. Padlock Park Cleaners

MAP 11
Large Quantity
Hazardous Waste Generators
Sumter County

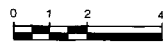
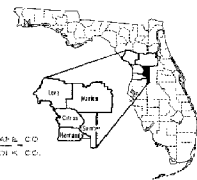
1. Arrico
2. Bushnell Electronics Manufacturing
3. Ferro Corporation
4. Royal Palm Ice Company
5. Seaboard System (Wildwood)
6. Seaboard System (Center Hill)
7. Silver Lake Packers, Inc.
8. Strickland Motor Sales, Inc.
9. Sumter Electric Co-op
10. Sumter Motor Corporation
11. Wildwood Quality Cleaners
12. Wildwood Truckers Paradise

KEY:

- General Location of Large Quantity Generator

SOURCES: Florida Department of Environmental Regulation,
Tampa, 1987.
Withlacoochee Regional Planning Council, 1987.

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



SUMTER COUNTY
FLORIDA

CHAPTER 5
INVENTORY OF PUBLIC FACILITIES

INVENTORY OF PUBLIC FACILITIES

This section documents the value of public facilities in the region. The values of public potable water supply facilities, public wastewater treatment plants, electrical substations, television, radio and telephone communication facilities, road and airport transportation networks, and healthcare establishments are documented.

PUBLIC POTABLE WATER SUPPLY FACILITIES

The Department of Environmental Regulation provided lists of public water supply facilities, the population served and design capacity of each system for the region. Public facilities are classified as those under federal, state, county or city jurisdiction, which includes facilities on School Board property. There are fifteen public wells in Citrus County (Table 30), twenty three in Hernando County, eight in Levy County, twenty three in Marion County and nine in Sumter County. Six of the region's wells are in surge-prone loss zones. Private well systems were not documented. Public potable water supply systems are shown for each county in Maps 12 to 16. Values for wells were calculated by using the following method: taking the value of the region's most expensive potable water supply system, the City of Ocala, worth over \$7.6 million for ten million gallons per day, a value of \$761 per thousand gallon per day was used to estimate values of other potable water supply systems. Since the City of Ocala system is the most advanced in the region estimated values for other facilities may be high, but represent a worst case scenario replacement value. The regional value of public potable water supply systems is \$28,458,000.

PUBLIC WASTEWATER TREATMENT FACILITIES

A list of public wastewater treatment facilities including the population served and design capacity was provided by the Department of Environmental Regulation. Table 36 shows the values of facilities in each county. There are twelve public treatment plants in Citrus County, sixteen in Hernando County, three in Levy County, twenty four in Marion County and six in Sumter County. Eight of the treatment facilities are located in surge-prone zones. Private wastewater treatment plants were not included. Maps 12 to 16 show the public wastewater treatment facilities in the region. Values of wastewater treatment facilities were calculated using the present cost of the new facility being built in Wildwood, Sumter County. Design capacities for facilities were used to calculate values, using City of Wildwood construction costs of \$2 million for 500 thousand gallons per day. The regional value of public wastewater treatment facilities is \$56,172,000.

ELECTRICAL FACILITIES

Values of electrical facilities were provided by the five electrical companies and two substations serving the Withlacoochee region. Values of non-profit utility facilities are documented in Chapter 6. Table 32 shows the values of facilities by county. The total regional value for replacement of electrical substations is \$80,010,951.

COMMUNICATION FACILITIES

Values for replacement of television, radio and telephone communication facilities were provided by the facilities serving the region. There are a large number of television and radio signals that can be received in the Withlacoochee region, from Tampa, Orlando, Gainesville and Jacksonville. However, the values for facilities that are documented in Table 33 are only those with equipment in the region. None of the television and radio communication facilities are situated in surge-prone zones. The regional replacement value for television and radio communication facilities is \$2,466,000.

There are three telephone companies serving the Withlacoochee Region. Table 34 shows the telephone companies with territory in the region. Values for replacement, where available, were provided by individual telephone companies. The territory of all three companies include surge-prone areas. The regional value for replacement of telephone communication facilities is \$260,326,000.

VALUE OF TRANSPORTATION FACILITIES

In the event of a hurricane strike, transportation routes are essential, not only for evacuation, but also for post-disaster recovery. The Withlacoochee region contains no port facilities, although Citrus and Levy Counties both have fishing industries (Chapter 3). There are two airports that are located within the surge-prone loss zones. These are located in Crystal River and Cedar Key, and neither provide commercial services. Losses are shown in Table 35. Disruption of major vehicular transportation networks are likely to be a result of hurricane strikes. Besides I-75, a major regional north-south arterial is U.S. 19 that occurs in surge-prone loss zones in all three coastal counties.

U.S. 19 is the only four lane road that would potentially be destroyed by hurricane surge and is a designated hurricane evacuation route. Several two lane roads occur in loss zones 1, 2, or 3 for short distances in Citrus and Hernando Counties. Highways 24 and 347 in Levy County are evacuation routes for Cedar

Key that could be potentially flooded, not only by storm surge, but also by flooding of the Suwannee River. Table 36 shows the estimated replacement values for all Federal, State and County coastal roads based on District V Florida Department of Transportation estimations.

Road Replacement

Type of Road	Replacement Cost Per Mile
Two lane rural highway	\$ 666,442
Four lane rural highway	\$1,276,087
Four lane urban highway - undivided	\$1,432,231
- divided	\$1,695,247

There are no urban divided four lane highways in the Withlacoochee region. The only urban four lane roadways are in the incorporated area of Crystal River, and in the unincorporated Spring Hill - Weeki Wachee area of Hernando County. It is assumed that inland roadways not affected by storm surge would not be damaged. The region contains one medium level clearance bridge in Citrus County. Department of Transportation estimations for District V were used to estimate replacement value.

Bridge Replacement

Construction Type	Replacement Cost Per Square Foot
Low Clearance Level	\$33.00
Medium Clearance Level	\$45.00
High Clearance Level	\$64.00
Movable Span	\$250.00

Values of airport facilities are shown in Table 35. The regional value of air transportation facilities is almost \$228 million. The regional value for highway transportation network replacement is over \$132 million.

HEALTH CARE FACILITIES

Listings of healthcare facilities in the Withlacoochee region were provided by the North Central Florida Health Planning Council. A list of hospitals, their location, number of beds, status, occupancy and value is shown in Chapter 6 (Table 46). The regional value of hospital facilities is \$138,320,000. Table 37 shows the location, number of beds, occupancy and replacement value of nursing homes in the region. Replacement values were calculated using the most recent Certificate of Need Application

in District III for a nursing home. The estimated price per bed of \$23,333 was used to calculate the replacement values of nursing homes depending upon bed capacity. There are four nursing homes in Citrus County, two of which are in surge-prone zones. No other counties have nursing homes in surge-prone zones. Hernando County has three nursing homes, Levy County one, Marion County four and Sumter County has one nursing home. The regional replacement values of nursing homes is over \$39 million.

There are two completed psychiatric hospitals in the Withlacoochee region, and two that are under construction (Table 38). These are located in Marion, Citrus and Hernando Counties respectively. Replacement values were calculated using the value per bed based on the Certificate of Need Application construction costs for Community Care of Citrus Psychiatric Hospital. The regional value of psychiatric hospitals is \$30,779.00.

PUBLIC POTABLE WATER SUPPLY AND WASTEWATER
TREATMENT FACILITIES

TABLE 30
PUBLIC POTABLE WATER SUPPLY FACILITIES
IN THE WITHLACOOCHEE REGION

Name	Location/ Loss Zone	Popula- tion Served	Design Capacity TGD	Storage Capacity TG	Value 1 (X \$1,000)
<u>Citrus County</u>					
Citrus County Utilities - Foxwood/Indian Acres	Lecanto, C6	75	396	2.0	\$ 302
Citrus County Utilities - Hampton Hills	Lecanto, C5	235	1,000	20.0	762
Citrus County Utilities - Meadowcrest	Lecanto, C3	25	1,000	7.5	762
City of Crystal River	Crystal River, C1	6,000	3,100	575.0	2,362
Floral City Water Association	Floral City, C7	2,403	72	285.0	55
Homosassa Special Water District	Homosassa, C1, C5	3,000	100	100.0	76
Inverness Water Depart- ment	Inverness, C7	2,975	99	575.0	75
Ozello Water Association	Ozello, C1, C2	3,100	720	305.0	549
South Dunnellon Water Association	Dunnellon, C5	300	430	5.0	328
Citrus County Fair Association	Inverness, C7	25	19	NA	15

TABLE 30 CONTINUED
PUBLIC POTABLE WATER SUPPLY FACILITIES
IN THE WITHLACOOCHEE REGION

Name	Location/ Loss Zone	Popula- tion Served	Design Capacity TGD	Storage Capacity TG	Value 1 (X \$1,000)
<u>Citrus County (Continued)</u>					
Citrus County Lecanto Govern- ment Association	Lecanto, C5	25	NA	NA	NA
Fort Cooper Recreation Area	Inverness, C7	60	36	NA	27
Holder Mine	Withlacoochee State Forest, C6	25	NA	NA	NA
Hernando Elementary School	Hernando, C6	25	40	0	31
Tillis Hill	Withlacoochee State Forest, C6	25	NA	NA	NA
					<hr/> \$5,344
<u>Hernando County</u>					
City of Brooksville	Brooks- ville, H5	8,800	72	580.0	55
Hernando County Utilities - Cedar Lane Sites	Brooks- ville, H6	285	300	0	229
Hernando County Utilities Dogwood Estates	Brooks- ville, H6	129	300	0.0	229

TABLE 30 CONTINUED
PUBLIC POTABLE WATER SUPPLY FACILITIES
IN THE WITHLACOOCHEE REGION

Name	Location/ Loss Zone	Popula- tion Served	Design Capacity TGD	Storage Capacity TG	Value 1 (X \$1,000)
<u>Hernando County (Continued)</u>					
Hernando County Utilities - Expansion #1	Brooks- ville, H4	5,000	65	65.0	50
Hernando County Utilities - High Point	Brooks- ville, H4	3,320	720	0.0	549
Hernando County Utilities - Lakeside Acres	Brooks- ville, H6	100	60	0	46
Hernando County Utilities - Ridge Manor	Brooks- ville, H7	2,500	828	10.0	631
Hernando County Utilities - Ridge Manor West	Brooks- ville, H7	2,500	1,400	5.0	1,067
Hernando County Utilities - Riverdale	Brooks- ville, H7	130	99	NA	75
Hernando County Utilities - Royal Highlands	Brooks- ville, H4	550	98	507.5	75
Hernando County Utilities - Springwood Estates	Brooks- ville, H4	43	NA	NA	NA

TABLE 30 CONTINUED
PUBLIC POTABLE WATER SUPPLY FACILITIES
IN THE WITHLACOOCHEE REGION

Name	Location/ Loss Zone	Popula- tion Served	Design Capacity TGD	Storage Capacity TG	Value 1 (X \$1,000)
<u>Hernando County (Continued)</u>					
Hernando County Utilities - Sun Road	Brooks- ville, H4	1,250	860	1.0	655
Buttgenbach Mine Camp- ground	Withla- coochee State Forest, H7	1,000	72	NA	55
H.A.R.C.	Brooks- ville, H6	25	NA	NA	NA
Hernando County Utilities - Airport	Brooks- ville, H4	43	65	5.0	50
Hernando County Utilities - Fair Association	Brooks- ville, H5	200	NA	NA	NA
McKethan Lake	Brooks- ville, H6	200	NA	NA	NA
Withlacoochee State Forest Colonel Robins Park	Withlacoochee State Forest, H5	200	860	0.06	655
Withlacoochee State Forest Headquarters	Brooks- ville, H6	35	NA	NA	NA
Withlacoochee State Forest Silver Lake	Withlacoochee State Forest, H7	25	72	0.22	55

TABLE 30 CONTINUED

PUBLIC POTABLE WATER SUPPLY FACILITIES
IN THE WITHLACOOCHEE REGION

Name	Location/ Loss Zone	Popula- tion Served	Design Capacity TGD	Storage Capacity TG	Value 1 (X \$1,000)
<u>Hernando County (Continued)</u>					
Withlacoochee State Forest Crooked River	Withla- coochee State Forest, H7	25	860	0.22	655
Withlacoochee State Forest Cypress Glen	Withla- coochee State Forest, H7	750	72	0.22	55
Withlacoochee State Forest Training Center	Brooks- ville, H6	100	72	3.0	55
					<hr/> \$5,241
<u>Levy County</u>					
Bronson Water Department	Bronson, L5	1,070	460	98.0	351
Cedar Key Water Department	Cedar Key, L1	1,750	360	98.8	274
Chiefland Water Department	Chiefland, L5	3,400	1,008	145.0	768
Otter Creek Water Department	Otter Creek, L4	168	230	7.0	175
Manatee Springs State Park	Chiefland, L4	250	50	0.16	38
Inglis Water System	Inglis, L3	41	12	1.35	9
City of Williston	Williston, L6	2,350	1,400	566.0	1,067
Yankeetown Water Department	Yankeetown, L2	600	166	100.5	122
					<hr/> \$2,804

TABLE 30 CONTINUED
PUBLIC POTABLE WATER SUPPLY FACILITIES
IN THE WITHLACOOCHEE REGION

Name	Location/ Loss Zone	Popula- tion Served	Design Capacity TGD	Storage Capacity TG	Value 1 (X \$1,000)
<u>Marion County</u>					
City of Belleview	Belleview, M5	1,360	150	70.0	114
Belleview-Santos Elementary School	Belleview, M5	575	144	0	110
DOT Rest Area Northbound	Ocala, M5	100	72	0.31	55
DOT Rest Area Southbound	Ocala, M5	100	72	0.31	55
City of Dunnellon	Dunnellon, M1	1,465	1,224	100	933
East Marion Elementary School	Ocala, M6	665	432	0	329
Fessenden Elementary School	Ocala, M4	528	432	0	329
Florida Correctional Institute	Lowell, M4	538	432	0	329
Fort McCoy Elementary School	Fort McCoy, M5	315	62	0	47
Lake Bryant Mobile Home Park	Oklawaha, M6	345	178	1.0	136
Marion Correctional Institute	Lowell, M4	877	1,094	0	834

TABLE 30 CONTINUED

PUBLIC POTABLE WATER SUPPLY FACILITIES
IN THE WITHLACOOCHEE REGION

Name	Location/ Loss Zone	Popula- tion Served	Design Capacity TGD	Storage Capacity TG	Value 1 (X \$1,000)
<u>Marion County (Continued)</u>					
Town of McIntosh	McIntosh, M4	462	40	55.0	31
Moss Bluff Recreation Area	Oklawaha, M6	0	158	1.0	120
North Marion High School	Lowell, M5	1,300	3	0	2
North Marion Middle School	Lowell, M4	1,181	3	0	2
Northwoods Alternative School	Ocala, M5	200	21	0	16
City of Ocala	Ocala, M5	37,737	10,000	595.0	7,617
Reddick-Collier Elementary School	Reddick, M4	300	72	0	55
Salt Springs Village	Silver Springs, M6	349	200	2.0	152
Sparr Elementary School	Sparr, M5	354	1,440	0	1,097
Stanton-Weirsdale Elementary School	Weirsdale, M6	578	172	0	131
Weirsdale Adult Center	Weirsdale, M6	25	19	0	15
Weirsdale Post Office	Weirsdale, M6	NA	NA	NA	NA
					<hr/> \$12,509

TABLE 30 CONTINUED

PUBLIC POTABLE WATER SUPPLY FACILITIES
IN THE WITHLACOOCHEE REGION

Name	Location/ Loss Zone	Popula- tion Served	Design Capacity TGD	Storage Capacity TG	Value 1 (X \$1,000)
<u>Sumter County</u>					
City of Center Hill	Center Hill, S3	781	60	60.0	46
City of Coleman	Coleman, S3	25	30	0	23
DOT I-75 Rest Area Northbound	Bushnell, S2	2,000	100	0.7	76
DOT I-75 Rest Area Southbound	Bushnell, S2	2,000	30	1.0	23
Florida Turnpike Plaza - Okahumpka	Okahumpka, S3	25	18	33.0	14
City of Webster	Webster, S3	740	1,100	60.0	838
City of Wildwood	Wildwood, S3	3,750	1,300	0	991
Sumter Correctional Institute	Bushnell, S2	1,500	720	215.0	549
Withlacoochee State Forest - Hog Island	Withla-coochee State Forest, S2	750	NA	NA	NA
					\$2,560

1 - Values calculated using design capacity based on the value of the City of Ocala facilities at \$762 per thousand gallons per day. This estimation was considered accurate by Sherrouse Well Drilling Co., 1987.

Sources: Florida Department of Environmental Regulation, DWSP94 Jacksonville, 1987.
Withlacoochee Regional Planning Council, 1987.
City of Ocala, Finance Office, 1987.
Sherrouse Well Drilling Co., 1987.

TABLE 31
PUBLIC WASTEWATER TREATMENT FACILITIES IN
THE WITHLACOOCHEE REGION

Name	Location	Loss Zone	Population Served	Design Capacity (TGD)	Value 1 (X \$1,000)
<u>Citrus County</u>					
Floral City Elem. School	Floral City	C7	300	6.0	24
Lecanto School Complex	Lecanto	C5	3,826	98.0	392
Hernando Elem. School	Hernando	C6	NA	5.0	20
Homosassa Springs Elem. School	Homosassa	C1	450	7.5	30
Meadowcrest	Crystal River	C3	NA	300.0	1,200
Key Pine Village	Crystal River	C5	54	5.0	20
Crystal River Old Plant	Crystal River	C1	NA	250.0	1,000
City of Inverness #1	Inverness	C7	3,000	400.0	1,600
City of Inverness, Regional	Inverness	C7	NA	1,500.0	6,000
Citrus Springs Elem. School	Inverness	C5	NA	10.0	40
Homosassa Springs Attraction	Homosassa Springs	C1	NA	4.0	16
South Dunnellon	Dunnellon	C5	NA	40.0	160
					10,502

TABLE 31 CONTINUED
PUBLIC WASTEWATER TREATMENT FACILITIES IN
THE WITHLACOOCHEE REGION

Name	Location	Loss Zone	Population Served	Design Capacity (TGD)	Value 1 (X \$1,000)
<u>Hernando County</u>					
West Hernando- Weeki Wachee	Weeki Wachee	H1	2,500	250.0	1,000
Hernando Co. Airport Industrial Park	Brooksville	H4	NA	300.0	1,200
High Point Mobile Home Park	Brooksville	H4	NA	300.0	1,200
Ridge Manor West Subdivision	Ridge Manor	H7	446	85.0	340
Royal High- lands the Heather	Weeki Wachee	H4	4,000	200.0	800
West Hernando Hernando Beach	Hernando Beach	H1	2,000	200.0	800
Pine Island State Park	Weeki Wachee	H1	NA	2.5	10
Timber Pines	Weeki Wachee	H4	NA	200.0	800
Hill 'n' Dale Subdivision	Brooksville	H6	600	100.0	400
Fort Dale Mobile Home Park	Near Dade City	H7	NA	9.0	36
City of Brooksville, Croom Hill	Brooksville	H5	1,700	375.0	1,500
City of Brooksville, School Street	Brooksville	H5	NA	750.0	3,000
City of Brooksville,	Brooksville	H5	925	50.0	200

TABLE 31 CONTINUED

PUBLIC WASTEWATER TREATMENT FACILITIES IN
THE WITHLACOOCHEE REGION

Name	Location	Loss Zone	Population Served	Design Capacity (TGD)	Value 1 (X \$1,000)
<u>Hernando County (Continued)</u>					
Damac Subdivision					
Southwest FL Water Mgmt. District	Brooksville	H5	175	10.0	40
Brooksville Road Prison	Brooksville	H5	NA	10.0	40
Withlacoochee STOP Camp	Near Lacoochee	H8	NA	5.0	20
					<u>11,386</u>
<u>Levy County</u>					
City of Williston	Williston	L6	2,000	200.0	800
City of Chiefland	Chiefland	L5	3,000	300.0	1,200
City of Cedar Key	Cedar Key	L1	1,000	100.0	400
					<u>2,400</u>
<u>Marion County</u>					
Belleview- Santos Elem. School	Belleview	M5	950	18.0	72
Lake Weir Middle School	Sunset Harbor	M5	1,159	25.0	100
North Marion High School	Sparr	M5	1,118	40.0	160
North Marion Middle School	Ocala	M4	1,164	25.0	100
Fessenden Elem. School	Ocala	M4	NA	15.0	60

TABLE 31 CONTINUED

PUBLIC WASTEWATER TREATMENT FACILITIES IN
THE WITHLACOOCHEE REGION

Name	Location	Loss Zone	Population Served	Design Capacity (TGD)	Value 1 (X \$1,000)
<u>Marion County (Continued)</u>					
Sparr Elem. School	Sparr	M5	400	5.0	20
Stanton- Weirsdale Elem School	Weirsdale	M6	645	10.0	40
Reddick- Collier School	Reddick	M4	350	9.0	36
East Marion Elem. School	Ocala	M6	735	10.0	40
Marion/Levy Bi-County High School	Dunnellon	M2	NA	24.0	96
Juniper Springs Recreation Site	Withlacoochee State Forest	M7	NA	19.0	76
U.S. Naval Tracking Station	Astor	M7	NA	15.0	60
City of Dunnellon	Dunnellon	M1	1,146	250.0	1,000
City of Belleview, #1	Belleview	M5	1,500	200.0	800
City of Belleview, #2	Belleview	M5	2,000	350.0	1,400
City of Belleview, #3	Belleview	M5	1,500	100.0	400
City of Ocala, #1	Ocala	M5	15,000	2,400.0	9,600
City of Ocala, #2	Ocala	M5	NA	3,500.0	14,000

TABLE 31 CONTINUED

PUBLIC WASTEWATER TREATMENT FACILITIES IN
THE WITHLACOOCHEE REGION

Name	Location	Loss Zone	Population Served	Design Capacity (TGD)	Value 1 (X \$1,000)
<u>Marion County (Continued)</u>					
Salt Springs Village	Salt Springs	M7	400	400.0	160
DOT Rest Area I-75 Northbound	Ocala	M5	NA	3.0	12
DOT Rest Area I-75 Southbound	Ocala	M5	NA	5.0	20
Moss Bluff Recreation Area	Moss Bluff	M6	30	3.0	12
Marion Correctional Inst.	Lowell	M4	1,000	220.0	880
Florida Correctional Institute	Lowell	M4	600	70.0	280
					<u>29,424</u>
<u>Sumter County</u>					
South Sumter High School	Bushnell	S3	730	26.0	104
City of Wildwood	Wildwood	S3	2,700	500.0	¹ 2,000
DOT Okahumpka Service Area	Wildwood	S3	NA	50.0	200
DOT Rest Area I-75, Southbound	Bushnell	S2	NA	10.0	40
DOT Rest Area I-75, Northbound	Bushnell	S2	20,140	10.0	40
Sumter Correctional Institution	Bushnell	S2	NA	19.0	76
					<u>2,460</u>

- 1 - Based on price of City of Wildwood wastewater treatment facility presently under construction, using \$2 million estimate for 500 Tg capacity.

Source: -Department of Environmental Regulation, Tampa,
Groundwater Management System Printout GMS 25, 1987.
-Ortega Industrial Contractor, Jacksonville, 1987.

MAP 12 Public Potable Water Supply and Wastewater Treatment Facilities Citrus County

- Wastewater Treatment Facilities**
1. Floral City Elementary School
 2. Lecanto School Complex
 3. Hernando Elementary School
 4. Homosassa Springs Elementary School
 5. Homosassa Springs Attraction
 6. Meadowcrest
 7. Key Pine Village
 8. City of Crystal River, Old Plant
 9. City of Inverness #1
 10. City of Inverness Regional
 11. South Dunnellon
 12. Citrus Springs Elementary School

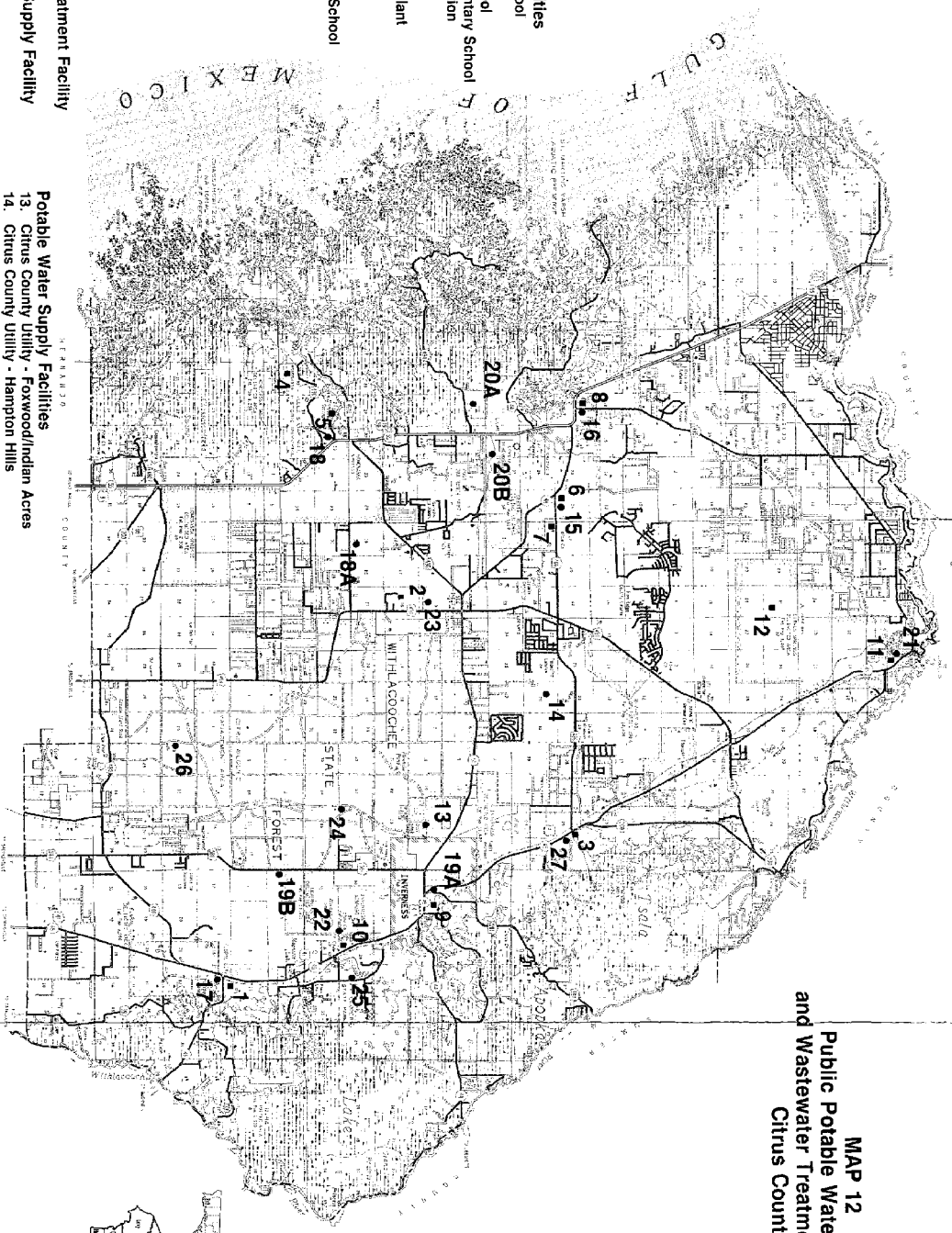
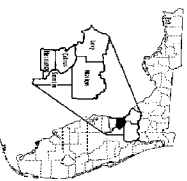
- KEY:**
- Wastewater Treatment Facility
 - Potable Water Supply Facility

SOURCES: Florida Department of Environmental Regulation, Tampa, 1987.
Wilfredo Regional Planning Council, 1987.

Base map prepared by the
Florida Department of Transportation
and the
Wilfredo Regional Planning Council

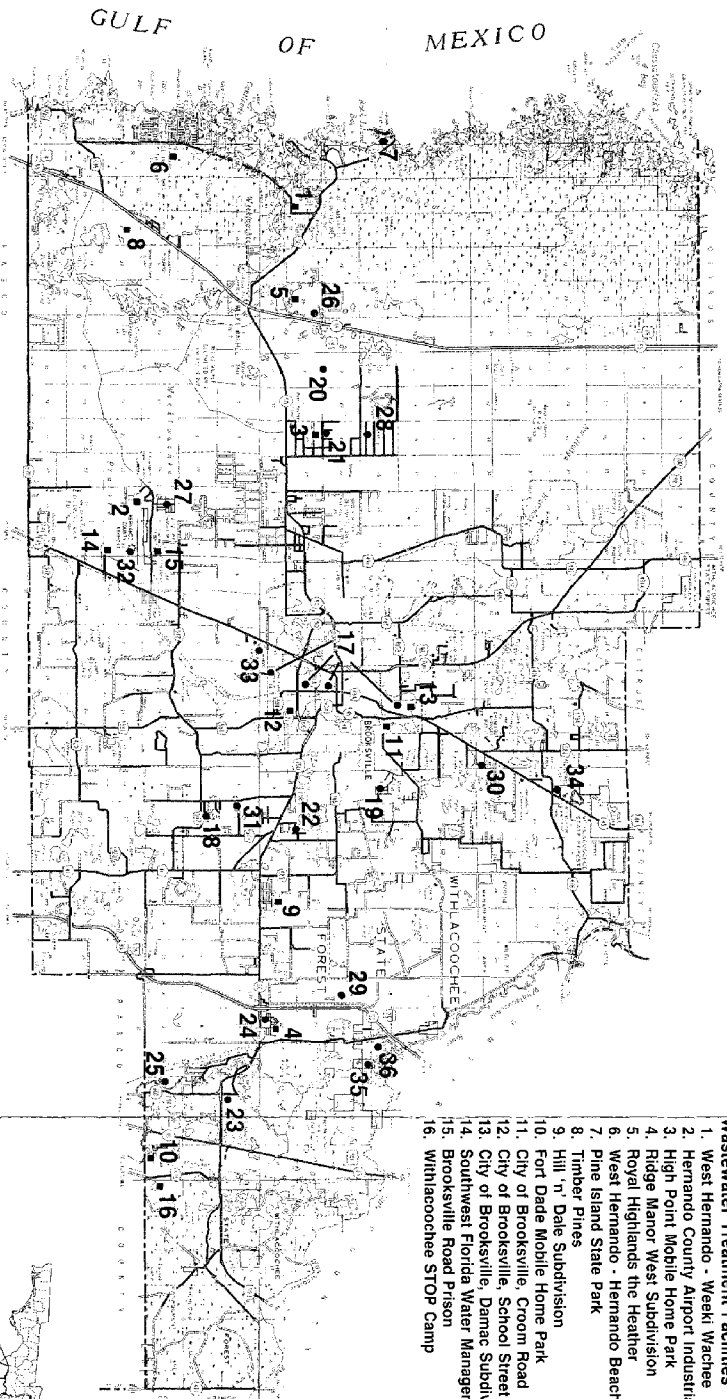
- Potable Water Supply Facilities**
13. Citrus County Utility - Foxwood/Indian Acres
 14. Citrus County Utility - Hampton Hills
 15. Meadowcrest
 16. City of Crystal River
 17. Floral City Water Association
 18. Homosassa Special Water District (A #1, 2 wells)
 19. Inverness Water Department (A #1 well, B #2 well)
 20. Ozello Water Association (A #1, 2 wells, B #3 well)
 21. South Dunnellon Water Association
 22. Citrus County Fair Association
 23. Citrus County Lecanto Government Center
 24. Holder Mine
 25. Ft. Cooper Recreation Area
 26. Tills Hill
 27. Hernando Elementary School

**CITRUS COUNTY
FLORIDA**



MAP 13 **Public Potable Water Supply** **and Wastewater Treatment Facilities** **Hernando County**

- Wastewater Treatment Facilities**
1. West Hernando - Weeki Wachee
 2. Hernando County Airport Industrial Park
 3. High Point Mobile Home Park
 4. Ridge Manor West Subdivision
 5. Royal Highlands the Heather
 6. West Hernando - Hernando Beach
 7. Pine Island State Park
 8. Timber Pines
 9. Hill 'n' Dale Subdivision
 10. Fort Dade Mobile Home Park
 11. City of Brooksville, Croom Road
 12. City of Brooksville, School Street
 13. City of Brooksville, Damac Subdivision
 14. Southwest Florida Water Management District
 15. Brooksville Road Prison
 16. Withlacoochee STOP Camp



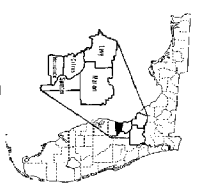
- KEY:**
- Wastewater Treatment Facility
 - Potable Water Supply Facility

SOURCES: Florida Department of Environmental Regulation, Tampa, 1987.
 Withlacoochee Regional Planning Council, 1987.

Map prepared by the
 Florida Department of Environmental Regulation
 Graphics and reproduction prepared by the
 Withlacoochee Regional Planning Council

Potable Water Supply Facilities

17. City of Brooksville
18. Hernando County Utility - Cedar Lane Sites
19. Hernando County Utility - Dogwood Estates
20. Hernando County Utility - Expansion #1
21. Hernando County Utility - High Point
22. Hernando County Utility - Lakeside Acres
23. Hernando County Utility - Ridge Manor
24. Hernando County Utility - Ridge Manor West
25. Hernando County Utility - Riverdale
26. Hernando County Utility - Royal Highland
27. Hernando County Utility - Springwood Estates
28. Hernando County Utility - Sun Road
29. Buttenback Mine
30. Withlacoochee State Forest, Col. Robins Park
31. H.A.R.C.
32. Hernando County Utility - Airport
33. Hernando County Utility - Fair Association
34. McKeithan Lake, Withlacoochee State Forest, Training Center and Headquarters
35. Withlacoochee State Forest, Silver Lake and Cypress Glen
36. Withlacoochee State Forest, Crooked River



HERNANDO COUNTY
 FLORIDA

MAP 14 **Public Potable Water Supply** **and Wastewater Treatment Facilities** **Levy County**

KEY:

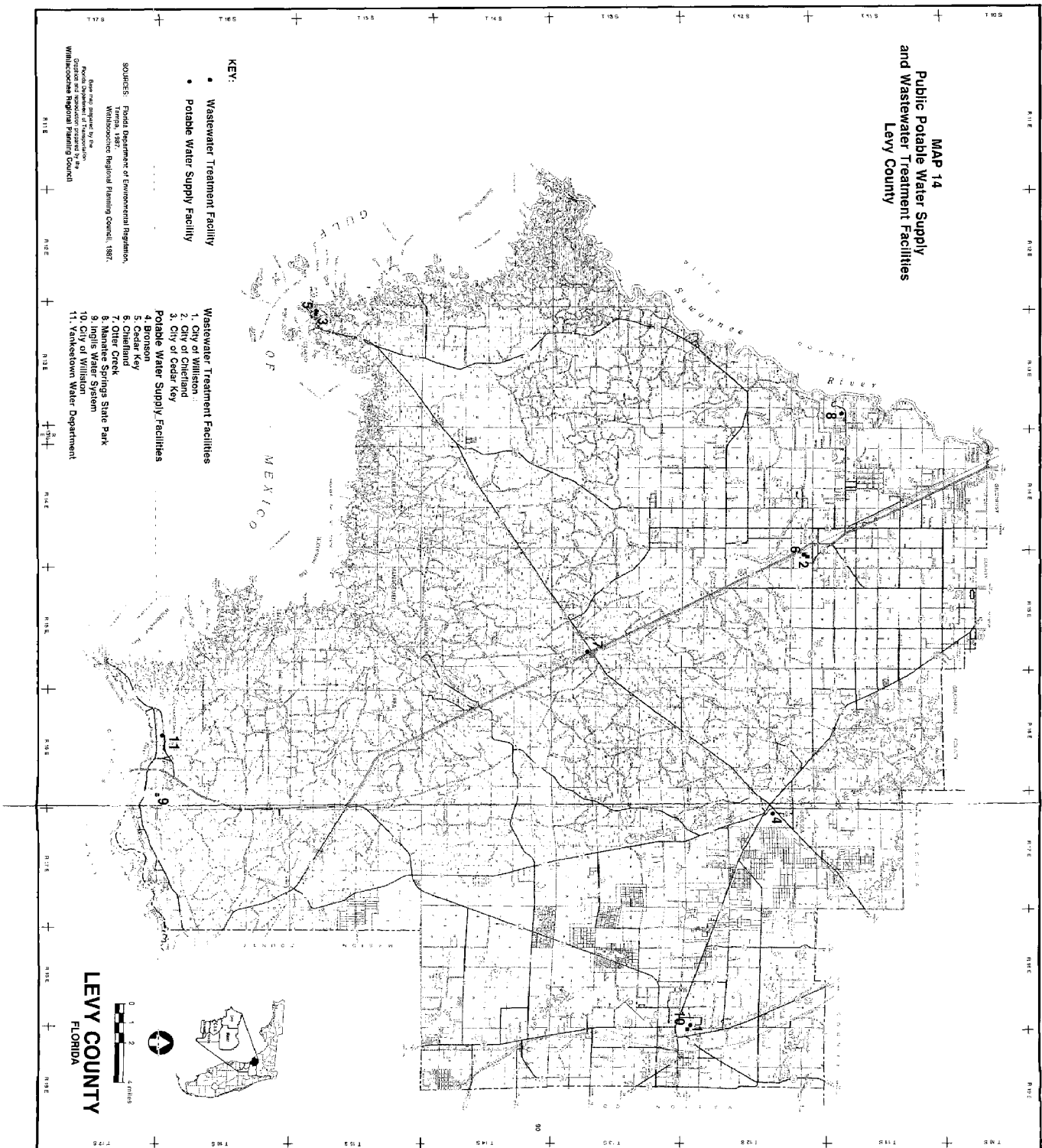
- Wastewater Treatment Facility
- Potable Water Supply Facility

SOURCES: Florida Department of Environmental Regulation,
 1987.
 Florida Department of Environmental Regulation,
 1987.
 Wolkowicz Regional Planning Council, 1987.

Map was prepared by the
 Florida Department of Environmental Regulation
 Division of Water Resources
 Division of Water Resources
 Wolkowicz Regional Planning Council

- Wastewater Treatment Facilities**
1. City of Williston
 2. City of Chiefland
 3. City of Cedar Key
- Potable Water Supply Facilities**
4. Bronson
 5. Cedar Key
 6. Chiefland
 7. Otter Creek
 8. Manatee Springs State Park
 9. High Water System
 10. City of Williston
 11. Vankeetown Water Department

LEVY COUNTY
 FLORIDA



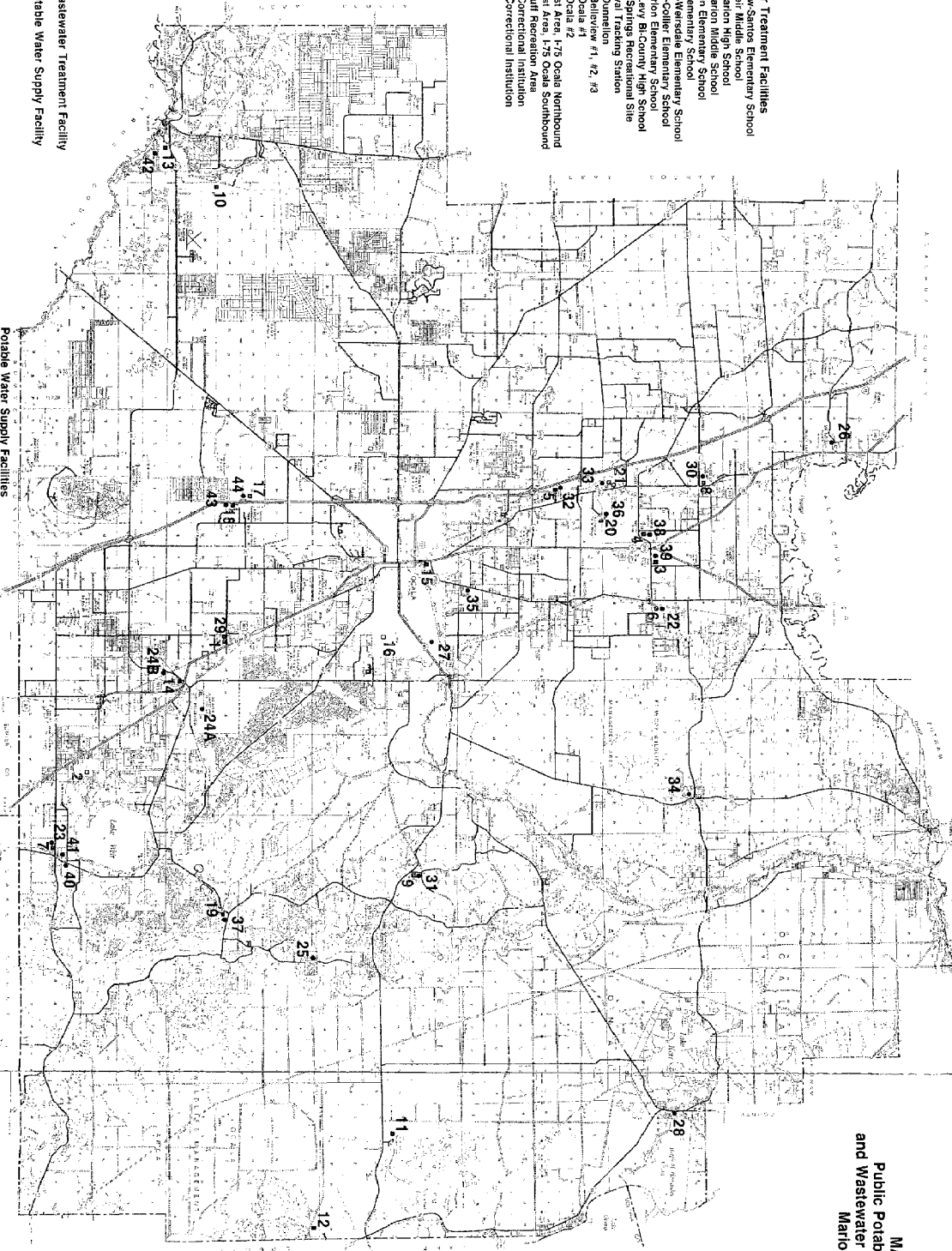
MAP 15 Public Potable Water Supply and Wastewater Treatment Facilities Marion County

- Wastewater Treatment Facilities**
1. Baker-Warrior Elementary School
 2. Lake War Middle School
 3. North Marion High School
 4. North Marion Middle School
 5. Pease Elementary School
 6. Sparr Elementary School
 7. Stanton-Warrior Elementary School
 8. Stanton-Warrior Elementary School
 9. Stanton-Warrior Elementary School
 10. Stanton-Warrior Elementary School
 11. Jupiter Springs Recreational Site
 12. U.S. Naval Training Station
 13. City of Dunnellon
 14. City of Belleview #1, #2, #3
 15. City of Ocala #1
 16. City of Ocala #2
 17. DOT Rest Area, I-75 Ocala Southbound
 18. DOT Rest Area, I-75 Ocala Southbound
 19. Moss Bluff Recreational Area
 20. Marion Correctional Institution
 21. Florida Correctional Institution

- KEY:**
- Wastewater Treatment Facility
 - Potable Water Supply Facility

SOURCES: Florida Department of Environmental Regulation,
Tampa, 1987.
Wastewater Regional Planning Council, 1987.

Map was prepared by
Graphic and reproduction prepared by the
Wastewater Regional Planning Council



Potable Water Supply Facilities

22. Sparr Elementary School
23. Stanton-Warrior Elementary School
24. Stanton-Warrior Elementary School
25. Lake War Middle School
26. Town of Melrose
27. City of Ocala
28. Salt Springs Village
29. Belleview-Santos Elementary School
30. Redick-Coller Elementary School
31. East Marion Elementary School
32. East Marion Elementary School
33. Florida Correctional Institution
34. Ft. McCoy Elementary School
35. Northwoods Alternative School
36. Marion Correctional Institution
37. Moss Bluff Recreational Area
38. North Marion High School
39. North Marion Middle School
40. Wescott Elementary School
41. Wescott Elementary School
42. City of Dunnellon
43. DOT Rest Area, I-75 Ocala Northbound
44. DOT Rest Area, I-75 Ocala Southbound

MARION COUNTY
FLORIDA



MAP 16 **Public Potable Water Supply** **and Wastewater Treatment Facilities** **Sumter County**

Wastewater Treatment Facilities

1. South Sumter High School
2. Wildwood
3. DOT Okahumpka Service Area
4. DOT Rest Area, I-75 Southbound
5. DOT Rest Area, I-75 Northbound
6. Sumter Correctional Institution

Potable Water Supply Facilities

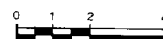
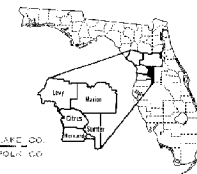
7. City of Center Hill Water Department
8. Sumter Correctional Institution
9. City of Webster
10. City of Wildwood
11. City of Coleman
12. DOT Rest Area, I-75 Northbound
13. DOT Rest Area, I-75 Southbound
14. Florida Turnpike Plaza, Okahumpka
15. Withlacoochee State Forest - Hog Island

KEY:

- Wastewater Treatment Facility
- Potable Water Supply Facility

SOURCES: Florida Department of Environmental Regulation,
Tampa, 1987.
Withlacoochee Regional Planning Council, 1987.

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



SUMTER COUNTY
FLORIDA

ELECTRICAL FACILITIES

TABLE 32

ELECTRICAL FACILITIES IN THE
WITHLACOOCHEE REGION

Substation Name or Number	Loss Zone	Approximate Replacement Value 1
<u>Citrus County</u>		
-Withlacoochee River Electric Cooperative, Inc.		
Number 1	C4	\$700,000
Number 3	C5	350,000
Number 10	C5	500,000
Number 4	C5	650,000
-Florida Power Corporation		
Crystal River Power Station	C1	\$11,585,100
Crystal River North	C1	160,800
Tropic Terrace	C1	227,200
Crystal River East	C2	755,500
Beverly Hills	C5	369,300
Crystal River South	C5	320,000
Dunnellon	C5	356,700
Twin Co. Ranch	C5	145,000
Holder	C6	1,316,500
Inverness	C7	676,000
Floral City	C7	44,200

TABLE 32 CONTINUED
ELECTRICAL FACILITIES IN THE
WITHLACOOCHEE REGION

Substation Name or Number	Loss Zone	Approximate Replacement Value 1
<hr/> -Sumter Electric Cooperative, Inc.		
Floral City	C7	550,000
Gospel Island	C7	550,000
Inverness	C7	600,000
		<hr/> 19,856,300
<u>Hernando County</u>		
-Withlacoochee River Electric Cooperative, Inc.		
Number 20	H4	\$ 350,000
Number 7	H4	1,100,000
Number 22	H4	1,000,000
Number 16	H4	900,000
Number 2	H5	1,000,000
Number 9	H6	650,000
Number 5	H7	450,000
-Florida Power Corporation.		
Brookridge	H4	\$6,069,060
Brooksville West	H4	969,040
Weeki Wachee	H4	62,900
Brooksville Rock	H4	166,870
Hammock	H4	555,430
Brooksville	H5	1,069,060
Camps #7 Mines	H5	162,900

TABLE 32 CONTINUED

ELECTRICAL FACILITIES IN THE
WITHLACOCOHEE REGION

Substation Name or Number	Loss Zone	Approximate Replacement Value 1
<u>Hernando County (Continued)</u>		
Florida Rock Products	H5	106,340
Consol Rock Products	H6	31,660
		<u>14,643,260</u>
<u>Levy County</u>		
-Central Florida Electric Cooperative, Inc.		
Cedar Key	L1	\$ 200,000
Inglis	L3	350,000
Otter Creek	L4	300,000
Bronson	L5	350,000
Chiefland #2	L5	200,000
Williston	L5	200,000
Chiefland #1	L7	350,000
-Florida Power Corporation.		
Inglis	L3	731,175
Lebanon	L4	47,927
Williston	L6	474,604
Georgia Pacific	L7	192,962

TABLE 32 CONTINUED

ELECTRICAL FACILITIES IN THE
WITHLACOOCHEE REGION

Substation Name or Number	Loss Zone	Approximate Replacement Value 1
<u>Marion County</u>		
-Clay Electric Co-op.		
Cara	M3	\$ 500,000
Procter	M4	200,000
Fort McCoy	M5	500,000
Salt Springs	M6	500,000
Central Tower	M6	350,000
Lynne	M6	350,000
-Florida Power Corporation		
Adams	M3	196,324
Martin	M4	68,524
Martin West	M4	1,495,841
Reddick	M4	251,005
Zuber	M4	156,402
Silver Springs	M5	1,477,006
Dallas	M5	21,342
Silver Springs Shores	M5	346,083
Santos	M5	84,092
Lake Weir	M6	368,404

TABLE 32 CONTINUED

ELECTRICAL FACILITIES IN THE
WITHLACOOCHEE REGION

Substation Name or Number	Loss Zone	Approximate Replacement Value 1
<u>Marion County (Continued)</u>		
-City of Ocala.		
Baseline	M5	1,000,000
Clyatt Park	M5	1,000,000
Dixie	M5	1,000,000
Downtown	M5	1,000,000
Enzion Road	M5	1,000,000
Main	M5	1,000,000
Maricamp	M5	1,000,000
North	M5	1,000,000
Ocala #1	M5	2,500,000
Ocala #2	M5	2,500,000
Paddock Mall	M5	1,000,000
Richmond Heights	M5	1,000,000
Shady Road	M5	1,000,000
Sharpes Ferry	M5	1,000,000
Silver Springs	M5	1,000,000
Water Plant	M5	1,000,000
-Sumter Electric Cooperative, Inc.		
Rainbow Lakes	M1	450,000
Blitchton	M3	400,000

TABLE 32 CONTINUED
ELECTRICAL FACILITIES IN THE
WITHLACOOCHEE REGION

Substation Name or Number	Loss Zone	Approximate Replacement Value 1
<u>Marion County (Continued)</u>		
-Sumter Electric Cooperative, Inc.		
Marion Oaks	M4	553,000
Ocala	M4	630,000
Belleview	M5	550,000
Dallas	M5	500,000
Linadale	M7	523,000
		<u>29,471,023</u>
<u>Sumter County</u>		
-City of Bushnell.		
Delivery Point #1	S3	40,000
-Florida Power Corporation.		
Bushnell	S3	189,300
Central Florida	S3	6,411,300
Center Hill	S3	52,600
Coleman	S3	345,500
-Sumter Electric Cooperative, Inc.		
Anderson	S3	2,350,000
Bushnell	S3	385,000
Continental	S3	550,000

TABLE 32 CONTINUED
ELECTRICAL FACILITIES IN THE
WITHLACOOCHEE REGION

Substation Name or Number	Loss Zone	Approximate Replacement Value 1
<u>Sumter County (Continued)</u>		
-Sumter Electric Cooperative, Inc. (Continued)		
Dixie	S3	385,000
Lake Panasoffkee	S3	600,000
Sumterville	S3	400,000
Webster	S3	385,000
Wildwood	S3	550,000
		<u>12,643,700</u>

1 - Replacement values provided by electric companies.

Sources: Central Florida Electric Cooperative, Inc. 1987.
City of Bushnell, 1987.
City of Ocala, Electric Administration Dept, 1987.
Clay Electric Co-op, 1987.
Florida Power Corporation, 1987.
Sumter Electric Cooperative, Inc., 1987.
Withlacoochee River Electric Cooperative, Inc., 1987.

COMMUNICATION FACILITIES

TABLE 33
COMMUNICATION FACILITIES IN THE
WITHLACOOCHEE REGION

Name	Transmission Type	Type of Facility	Loss Zone	Replacement Value ¹ \$
<u>Citrus County</u>				
WTRS/WGAM	radio	tower	C5	\$150,000
WKIQ	radio	tower	C6	25,000
WXCB	radio	tower	C5	20,000
<u>Hernando County</u>				
WWJB	radio	tower	H5	12,000
<u>Levy County</u>				
WLQH	radio	Satellite tower	C6 C6	6,000 150,000
<u>Marion County</u>				
WMOP	radio	transmitter	M5	125,000
WMMZ	radio	tower	M5	500,000
		transmitters	M5	130,000
WOCA	radio	tower	M5	75,000
WTMC	radio	tower- transmitter	M4	150,000
WMIM	radio	satellite	M5	8,000
WMFQ	radio	tower- transmitter	M5	100,000
WCJB	television	translater	M5	130,000
WOGX	television	satellite	M4	50,000
		microwave	M4	15,000
		tower	M4	700,000
WESH	television	tower & microwave	M5	120,000
				<u>\$2,466,000</u>

1 - Replacement values provided by individual companies.
Source: Withlacoochee Regional Planning Council, 1987.

TABLE 34

TELEPHONE FACILITIES IN THE
WITHLACOCOHEE REGION

Name	County	Value 1 \$
All Tel	Citrus County	NA
Southern Bell	Citrus County	\$ 6,000,000
United Telephone	Citrus County	48,715,000
All Tel	Hernando County	NA
Southern Bell	Hernando County	8,000,000
United Telephone	Hernando County	799,000
All Tel	Levy County	NA
Southern Bell	Levy County	20,000,000
United Telephone	Levy County	5,934,000
All Tel	Marion County	NA
Southern Bell	Marion County	12,000,000
United Telephone	Marion County	142,143,000
All Tel	Sumter County	NA
United Telephone	Sumter County	17,534,000
		<u>\$261,125,000</u>

1 - Information provided by telephone companies.

Sources: Southern Bell, 1987.
United Telephone, 1987.

TRANSPORTATION FACILITIES

TABLE 35

ESTIMATED VALUES OF AIRPORTS WITHIN THE
WITHLACOOCHEE REGION

Name	Loss Zone	Type of Facility	Value \$
<u>Citrus County</u>			
Crystal River Airport	C1	All Facilities	\$ 250,000
Inverness Airport	C7	Land	377,800
		Buildings	150,000
		Runway	3,000,000
<u>Hernando County</u>			
Hernando County Airport	H4	Land	8,750,000
		Buildings & Runway	47,250,000
<u>Levy County</u>			
Cedar Key Airport	L1	Land & Runway	60,000
Williston Airport	L5	Land	68,000,000
		Buildings	385,000
		Runway	12,000,000
<u>Marion County</u>			
Dunnellon Airport	M2	Land	13,500,000
		Buildings	300,000
		Runway	59,000,000
Ocala Airport	M4	Buildings	423,427
		Runways, lights and Fences	2,671,349
		Land	11,880,000
Regional Total			\$227,997,576

Sources: Citrus County Department of Development Services, 1987.
Hernando County Office of Economic Development, 1987.
Levy County Property Appraiser, 1987.
Williston Planning and Zoning Department, 1987.
Dunnellon Airport and Industrial Park Advisory Board,
1987.
City of Ocala City Manager's Office and City Planning
Department, 1987.
Withlacoochee Regional Planning Council, 1987.

TABLE 36
LOSSES TO COASTAL ROADS IN THE
WITHLACOOCHEE REGION

Road Name or Number	Loss Zone	Road Type	Mileage	Replacement Value 1 (X \$1,000)
<u>Citrus County</u>				
County Road 484	C1	2 Lane Rural	3.0	\$ 1,999
County Road 490	C1	2 Lane Rural	4.0	2,666
County Road 490A	C1	2 Lane Rural	3.0	1,999
County Road 494	C1	2 Lane Rural	9.0	5,998
County Road 44	C1	2 Lane Rural	10.0	6,664
Power Line Road	C1	2 Lane Rural	4.0	2,666
U.S. Highway 19	C1	4 Lane Rural	8.0	10,209
U.S. Highway 19	C1	4 Lane Urban	4.0	5,729
			Total for C1	<u>\$37,930</u>
County Road 480	C2	2 Lane Rural	3.0	1,999
County Road 490	C2	2 Lane Rural	1.0	666
Power Line Road	C2	2 Lane Rural	0.5	333
U. S. Highway 19	C2	4 Lane Rural	13.0	16,589
Florida Barge Canal Bridge	C2	Medium Level Span Bridge	2.0	3,261
			Total for C2	<u>\$22,848</u>
County Road 490	C3	2 Lane Rural	1.0	666
			Total for C3	<u>\$666</u>
			Citrus County Total	<u>\$61,444</u>

TABLE 36 CONTINUED
LOSSES TO COASTAL ROADS IN THE
WITHLACOOCHEE REGION

Road Name or Number	Loss Zone	Road Type	Mileage	Replacement Value 1 (X \$1,000)
<u>Hernando County</u>				
State Road 595	H1	2 Lane Rural	13.0	\$ 8,664
State Road 50	H1	2 Lane Rural	2.5	1,666
			Total for H1	\$10,330
State Road 595	H2	2 Lane Rural	0.5	333
State Road 50	H2	2 Lane Rural	1.0	666
U.S. Highway 19	H2	4 Lane Rural	3.5	4,466
			Total for H2	\$5,465
State Road 595	H3	2 Lane Rural	0.5	333
State Road 50	H3	2 Lane Rural	1.5	1,000
U. S. Highway 19	H3	4 Lane Rural	4.0	5,104
U. S. Highway 19	H3	4 Lane Urban	4.0	5,729
			Total for H3	\$12,166
			Hernando County Total	\$ 27,961
<u>Levy County</u>				
County Road 347	L1	2 Lane Rural	14.0	9,330
County Road 326	L1	2 Lane Rural	3.5	2,333
State Road 24	L1	2 Lane Rural	10.5	6,998
			Total for L1	\$18,661

TABLE 36 CONTINUED
LOSSES TO COASTAL ROADS IN THE
WITHLACOOCHEE REGION

Road Name or Number	Loss Zone	Road Type	Mileage	Replacement Value 1 (X \$1,000)
<u>Levy County (Continued)</u>				
County Road 347	L2	2 Lane Rural	2.5	1,666
State Road 24	L2	2 Lane Rural	1.5	1,000
U. S. Highway 19	L2	4 Lane Rural	1.5	1,914
Total for L2				\$4,580
County Road 347	L3	2 Lane Rural	2.0	\$ 1,333
State Road 24	L3	2 Lane Rural	6.0	3,999
U. S. Highway 19	L3	4 Lane Rural	11.0	14,037
Total L3				\$19,369
Levy County Total				\$42,610

1 - Values estimated using replacement figures provided by the Department of Transportation, District V.

2 - Value calculated using 72,461 square feet.

Sources: Florida Department of Transportation, Deland, 1987.
Withlacoochee Regional Planning Council, 1987.

HEALTHCARE FACILITIES

TABLE 37

NURSING HOMES IN THE WITHLACOOCHEE REGION

Name	Location/ Loss Zone	# of Beds	Occupancy %	Replacement Value 1 (X \$1,000)
<u>Citrus County</u>				
-The Health Center at Bentwood	Lecanto, C5	60	95.2	\$ 1,400
-Crystal River Geriatric Center	Crystal River, C1	150	87.1	3,500
-Cypress Cove Center	Crystal River, C1	120	96.4	2,800
-Inverness Healthcare Center	Inverness, C6	104	95.4	2,427
<u>Hernando County</u>				
-Brooksville Nursing Manor	Brooksville, H5	180	98.7	4,200
-Eastbrooke Health Care Center	Brooksville, H5	120	98.5	2,800
-Evergreen Woods Health Care Center	Spring Hill, H4	60	99.4	1,400
<u>Levy County</u>				
-Oakview Care Center	Williston, L6	180	82.8	4,200
<u>Marion County</u>				
-Oakhurst Manor Nursing Home	Ocala, M5	120	62.8	2,800
-Ocala Healthcare Center	Ocala, M5	133	92.1	3,103
-New Horizon Rehabilitation Center	Ocala, M5	89	95.1	2,077
-Ocala Geriatric Center	Ocala, M5	180	93.0	4,200
<u>Sumter County</u>				
-Wecare	Wildwood, S3	180	96.2	4,200
				<u>\$39,107</u>

1 - Based on the most recent District III Nursing Home Certificate of Need Application (Health Care Associates, Ocala) price per bed estimation at \$23,333.

Source: North Central Florida Health Planning Council, 1987.
Withlacoochee Regional Planning Council, 1987.

TABLE 38
PSYCHIATRIC HOSPITALS IN THE WITHLACOOCHEE REGION

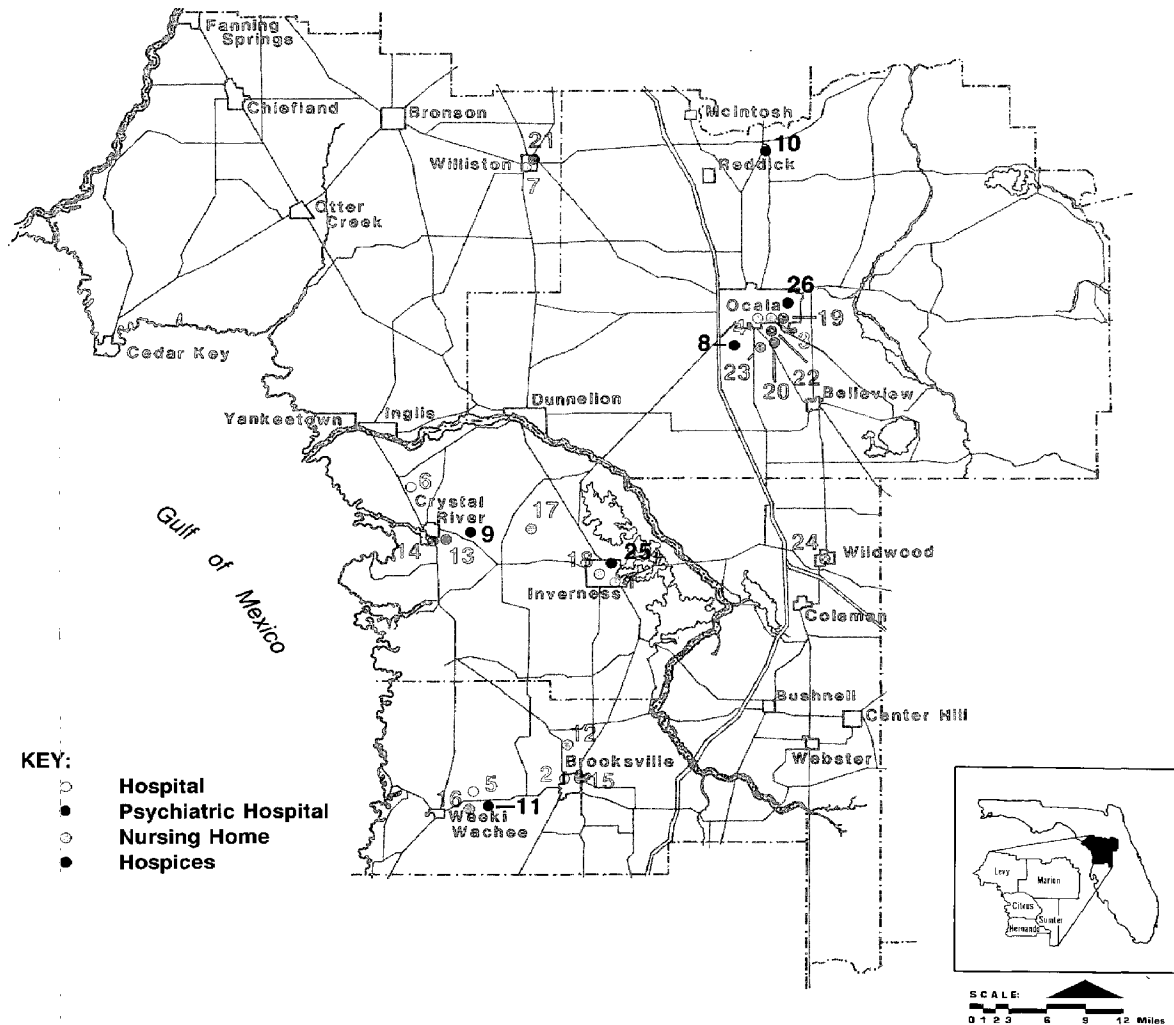
Name of Hospital	Location/ Loss Zone	Type of Facility	Number of Beds	Replacement Value 1 (X \$1,000)
<u>Citrus County</u>				
Community Care of Citrus*	Lecanto, C5	Freestanding	88	8,308
<u>Hernando County</u>				
Hernando Psychiatric Hospital*	Brooksville, H5	Freestanding	50	\$ 4,721
<u>Marion County</u>				
Charter Springs Hospital	Ocala, M4	Hospital	68	6,420
Grant Center of Ocala	Ocala, M5	Hospital	120	11,330
				<u>\$30,779</u>

1 - Replacement value calculated using most recent District III Psychiatric Hospital Certificate of Need Application (Community Care of Citrus, Lecanto) price per bed estimation at \$94,414.

* Still under construction

Source: Withlacoochee Regional Planning Council, 1987.
North Central Florida Health Planning Council, 1987.

MAP 17 **Hospital and Healthcare Facilities in** **the Withlacoochee Region**



CHAPTER 6
INVENTORY OF PRIVATE NON-PROFIT FACILITIES

INVENTORY OF PRIVATE NON-PROFIT FACILITIES

This section documents the values of non-profit facilities in the region. Private non-profit educational institutions, utility companies, emergency facilities and hospital and custodial care facilities are located by loss zones, and an assessment of value is made, where possible.

Private Non-Profit Educational Facilities

Table 39 shows the list of private non-profit educational facilities within the Withlacoochee region. There are five establishments in Citrus County, with three in surge-prone zones. Hernando County also has five schools, none of which are in zones likely to experience flooding. Levy, Citrus and Hernando Counties all have one nonreligious private non-profit educational establishment, each for exceptional students. Levy County has one of six county facilities in a surge-prone zone. Marion County has twelve non-profit educational facilities, and Sumter County has two. Values for these establishments were not available, because all land uses claiming non-profit status are tax exempt. Schools associated with religious institutions also claim religious exemptions from property taxes.

Private Non-Profit Utility Companies

The Withlacoochee region has four non-profit utility companies: Central Florida Electric Cooperative, Clay Electric Co-op, Sumter Electric Cooperative and Withlacoochee River Co-op. Values of facilities operated were provided by each company for each county in the region. Values, where provided, for transmission facilities, lines, substations, consumer services centers and current construction costs could not be separated from the total county value. The total value of non-profit utility companies in the region is \$111,222,108, shown in Table 40.

Fire and Ambulance Emergency Facilities

Tables 41 to 45 show the names, locations, number of employees and estimated value of fire stations in the Withlacoochee Region. Maps 18 to 22 show the locations by county of fire and ambulance facilities. Citrus County has fifteen fire stations, with a total value of \$683,777 (Table 41). This value excludes an estimated \$100,000 for each tanker pumper. The total value of Citrus County assets including fire trucks, communication

facilities, office equipment and building values is over \$3.8 million. Citrus County has six ambulance substations. The average cost for replacement of an ambulance substation is \$125,000 and the replacement value for the vehicle with equipment is \$80,000 (Citrus County Emergency Medical Services, 1987). The total value of Hernando County's seven fire stations is \$1,730,000 with an additional \$500,000 for four ambulance substations without equipment. Levy County has 3 ambulance facilities, and ten fire stations, all of which are volunteer establishments. Values of fire stations in Levy County were impossible to determine where the facility adjoined a city hall. Marion County has twenty-seven fire stations, several of which are still under construction (Table 44). The City of Ocala Fire Department has 3 fire stations and an administrative building, worth \$430,573 in total. The County fire departments are worth \$957,193, and the eight ambulance stations, excluding equipment, comprise a total potential loss value for all Marion County emergency facilities of \$2,387,766. Values for fire departments in Sumter County are shown in Table 45.

The total regional value of fire stations excluding equipment, where values were available is over four million dollars. The value of all emergency facilities, including the twenty-three ambulance stations, is over \$6.8 million.

Non-Profit Medical Facilities

The value, status, number of beds, occupancy and location of hospitals in the region, including private non-profit facilities is shown in Table 46. There are three private non-profit hospitals in the region: Lykes Memorial Hospital in Hernando County, Williston Memorial Hospital in Levy County, and Munroe Regional Medical Center in Marion County. None of these hospitals are in surge-prone zones. Values of hospitals were calculated based on the number of beds per facility. An estimation of replacement cost per bed at \$130,000 was provided by Lykes Memorial and Citrus Memorial Hospital. The combined regional value of private non-profit facilities is \$67,210,000.

Private Non-Profit Custodial Care Facilities

Four establishments provide non-profit custodial care facilities in the region. These are Marion-Citrus Mental Health Center, Inc., Hernando County Community Mental Health Center, Inc., Mental Health Services, Inc., and Lake-Sumter Mental Health Center, Inc (Table 47). None of the custodial care facilities are located in surge-prone zones. Values for replacement of facilities were provided by the facilities. Values used were the figures for which facilities were insured. The total replacement value for custodial care facilities in the region is \$2,849,000.

PRIVATE NON-PROFIT EDUCATIONAL FACILITIES

TABLE 39

PRIVATE NON-PROFIT EDUCATIONAL FACILITIES IN
THE WITHLACOOCHEE REGION

Name	Location/ Loss Zone	School Type	Grades/ Pupils
<u>Citrus County</u>			
Central Catholic School	Crystal River, C1	Religious Catholic	K-3 Coed
Citrus Christian School	Homosassa Springs, C1	Religious Christian	K-10 Coed
Crystal River Christian Academy	Crystal River, C1	Religious Church of God	K-12 Coed
Eckerd Wilderness Educational Systems	Floral City, C7	Nonreligious Exceptional	K-12 Coed
New Testament Christian School	Floral City, C7	Religious Baptist	K-12 Coed
<u>Hernando County</u>			
Brooksville Seventh-Day Adventist	Brooksville, H5	Religious Seventh-Day Adventist	K-7 Coed
Eckered Wilderness Educational Systems	Brooksville, H5	Nonreligious	K-5 Boys
Eden Christian	Brooksville, H5	Religious Nondenominational	PK-5 Coed
First United Methodist School Center	Brooksville, H5	Religious Methodist	PK-3 Coed
Saint Theresa Catholic School	Spring Hill, H4	Religious Catholic	1-2 Coed
<u>Levy County</u>			
Calvary High School	Inglis, L3	Religious Pentecostal	Coed
Good Shepherd Academy	Chiefland, L7	Nonreligious	K-12 Coed
Hurricane Island Outward Bound School	Chiefland, L7	Nonreligious Exceptional	Girls

TABLE 39 CONTINUED
PRIVATE NON-PROFIT EDUCATIONAL FACILITIES IN
THE WITHLACOOCHEE REGION

Name	Location/ Loss Zone	School Type	Grades/ Pupils
<u>Levy County (Continued)</u>			
Joppa Christian School	Trenton, L7	Religious Baptist	K-7 Coed
Morning Glory School	Bronson, L5	Religious Universal Church	2-9 Coed
Williston Christian Academy	Williston, L6	Religious Baptist	K-11 Coed
<u>Marion County</u>			
Blessed Trinity	Ocala, M5	Religious Catholic	PK-8 Coed
Dunnellon Christian	Dunnellon, M1	Religious Christian	K-4 Coed
Grace Episcopal School	Ocala, M5	Religious Episcopal	PK-8 Coed
Highlands Baptist School	Ocala, M6	Religious Baptist	PK-K Coed
Little Friends Kindergarten	Belleview, M5	Religious Baptist	PK-K Coed
Memorial Christian School	Ocala, M5	Religious Baptist	PK-12 Coed
New Hope School	Ocala, M5	Nonreligious Exceptional	Coed
Oak Griner Christian School	Ocala, M5	Religious Baptist	K-8 Coed
Ocala Christian Academy	Ocala, M5	Religious Baptist	PK-12 Coed
St. John Lutheran	Ocala, M5	Religious Lutheran	PK-12 Coed

TABLE 39 CONTINUED

PRIVATE NON-PROFIT EDUCATIONAL FACILITIES IN
THE WITHLACOOCHEE REGION

Name	Location/ Loss Zone	School Type	Grades/ Pupils
<u>Marion County (Continued)</u>			
Shiloh Seventh-Day Adventist Church School	Ocala, M5	Religious Seventh-Day Adventist	1-8 Coed
Wedgeland Academy	Silver Springs, M5	Nonreligious	7-12 Coed
<u>Sumter County</u>			
Kings Academy	Wildwood, S3	Religious Nondenominational	K-12 Coed
Sumter Christian School	Wildwood, S3	Religious Baptist	PK-12 Coed

Sources: Florida Department of Education. "The Florida Education Directory 1986-1987."
Withlacoochee Regional Planning Council, 1987.

NON-PROFIT UTILITIES

TABLE 40

VALUES OF NON-PROFIT UTILITY
FACILITIES IN THE WITHLACOOCHEE REGION

Company Name	Location	County	Value \$	
¹ Central Florida Electric Cooperative, Inc.	Chiefland	Levy	\$ 1,950,000	⁵
² Clay Electric Co-Op	Keystonee Heights	Levy Marion	NA	
³ Sumter Electric Cooperative, Inc.	Sumterville	Citrus Hernando Levy Marion Sumter	14,632,364 294,818 1,480,639 25,286,435 19,309,852	
⁴ Withlacoochee River Electric Cooperative	Dade City	Citrus Hernando Sumter	13,170,000 34,270,000 730,000	
Total Value			\$111,124,108	⁶

1. This company also serves Alachua, Dixie, Gilchrist and Taylor Counties.
2. This company also serves ten other counties in northeast Florida.
3. Also serves Lake and Pasco Counties.
4. Also serves Pasco and Polk Counties.
5. Value of Substations only.
6. Excludes Clay Electric Co-op.

Sources: Central Florida Electric Cooperative, Inc., 1987
 Clay Electric Co-Op, 1987.
 Sumter Electric Cooperative, Inc., 1987.
 Withlacoochee River Electric Co-op, Inc., 1987.

FIRE AND AMBULANCE EMERGENCY FACILITIES

TABLE 41

FIRE DEPARTMENTS IN CITRUS COUNTY

Name	Location	Loss Zone	Employees Paid/ Volunteer	Value \$	2
Citrus County Fire Commission	Lecanto	C5	4/0	NA	
*Beverly Hills Volunteer Fire Co.	Beverly Hills	C5	0/29	NA	
*Chassahowitzka Volunteer Fire Dept.	Homosassa	C2	0/25	45,310	
*Inverness Volunteer Fire & Rescue Dept.	Inverness	C7	0/32	51,901	
*Citrus Springs Volunteer Fire Dept.	Citrus Springs	C5	0/38	53,995	
*Connell Heights Volunteer Fire Dept.	Crystal River	C3	0/21	42,934	
*Crystal River Fire Dept.	Crystal River	C1	0/16	46,244	
*DeRosa Volunteer Fire Dept.	Dunnellon	C4	0/22	57,202	
*Floral City Volunteer Fire Dept.	Floral City	C7	0/40	36,814	
*Gospel Island Volunteer Fire Dept.	Inverness	C7	0/18	32,074	
*Hernando Volunteer Fire Dept.	Hernando	C6	0/25	56,674	
*Highlands Volunteer Fire Dept.	Inverness	C7	0/48	56,733	
*Homosassa Volunteer Fire Dept.	Homosassa	C1	0/29	144,784	

TABLE 41 CONTINUED
FIRE DEPARTMENTS IN CITRUS COUNTY

Name	Location	Loss Zone	Employees Paid/ Volunteer	Value 2 \$
*Ozello Volunteer Fire Dept.	Crystal River	C1	0/29	59,112
Brentwood Fire 1 Station	Lecanto	C5	NA	NA
				683,777 ³

*Volunteer Departments

- 1 - Status unknown.
- 2 - Information supplied by Citrus County Fire Commission.
- 3 - This total not complete.

Sources: Citrus County Fire Commission, 1987.
Florida Department of Insurance and Treasurer, 1987.

MAP 18 **Fire and Ambulance Emergency Facilities** **Citrus County**

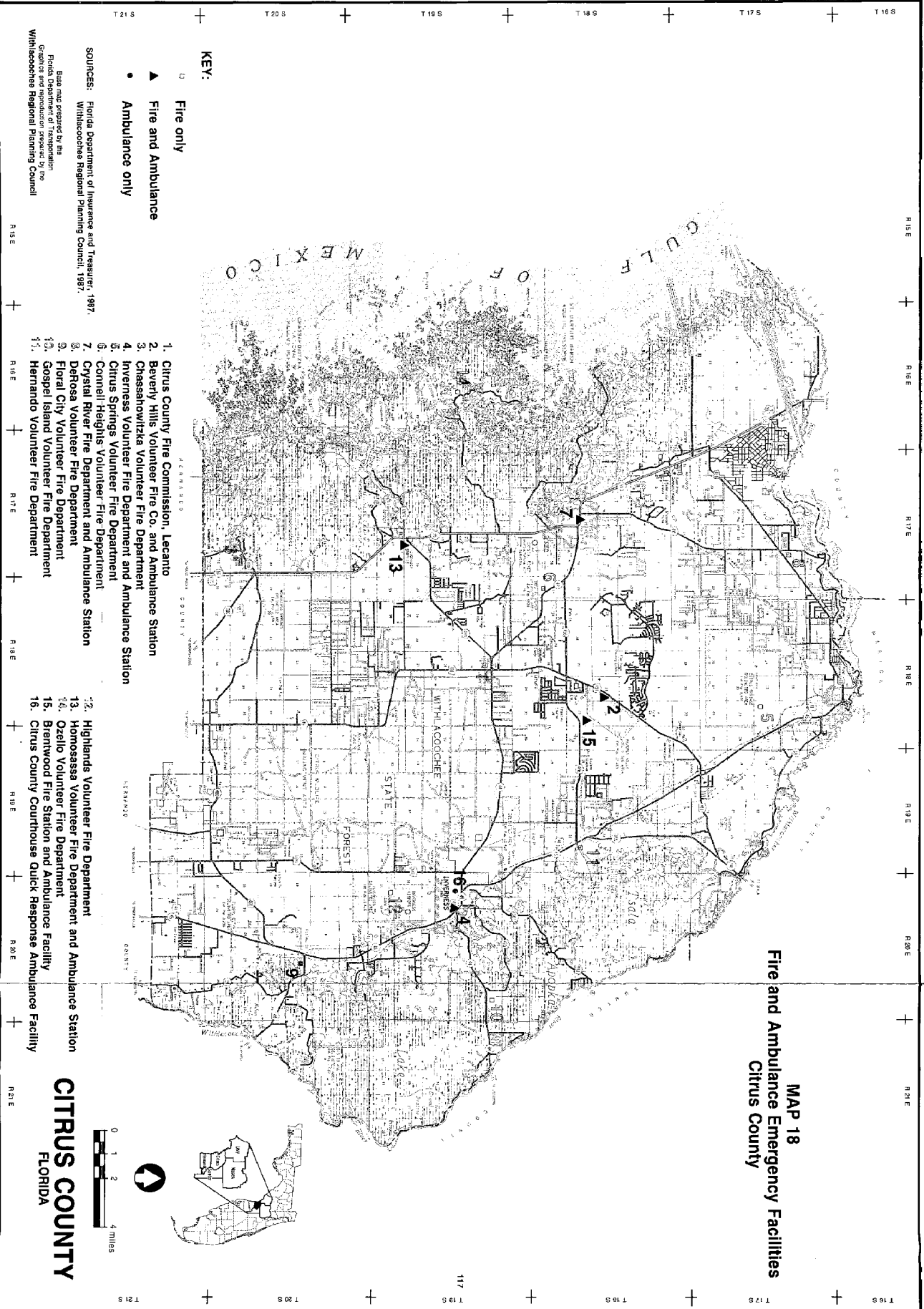


TABLE 42
FIRE DEPARTMENTS IN HERNANDO COUNTY

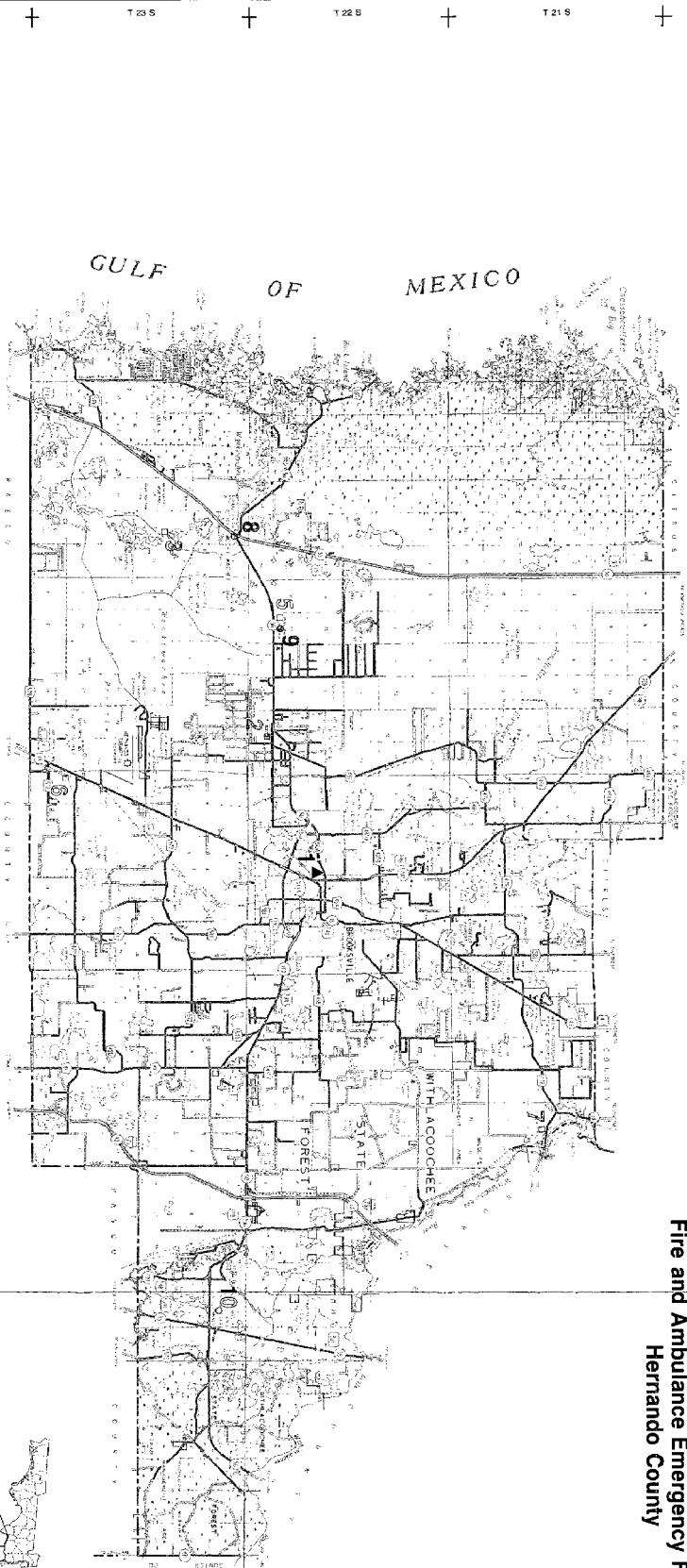
Name	Location	Loss Zone	Employees Paid/ Volunteer	Value \$
Brooksville Fire Dept.	Brooksville	H5	17/12	\$ 400,000
N.W. Hernando Co. Fire Control	Brooksville	H4	21/10	100,000
Spring Hill Fire and Rescue District	Spring Hill	H4	40/10	1,090,000
*East Hernando Volunteer Fire Association	Brooksville	H6	0/26	2
*Hernando High Point Volunteer Fire Dept.	Brooksville	H4	0/25	40,000
*Masaryktown Volunteer Fire Dept.	Masaryktown	H4	0/10	2
*Tri-County Volunteer Fire Dept.	Brooksville	H6	0/17	100,000
				1,730,000 ³

*Volunteer Departments

- 1 - Estimations provided by Hernando County Department of Civil Defense.
- 2 - Facility does not have a station.
- 3 - Total not complete.

Sources: Hernando County Civil Defense, 1987.
Florida Department of Insurance and Treasurer, 1987.

MAP 19 **Fire and Ambulance Emergency Facilities** **Hernando County**



- KEY:**
- Fire only
 - ▲ Fire and Ambulance
 - Ambulance only

SOURCES: Florida Department of Insurance and Treasurer, 1987.
 Map prepared by the
 Graphics and reproduction created by the
 Withlacoochee Regional Planning Council, 1987.

1. Brooksville Fire Department and Ambulance Facility
2. N. W. Hernando County Fire Control
3. Spring Hill Fire and Rescue District
4. East Hernando Volunteer Fire Assn.
5. Hernando High Point Volunteer Fire Department
6. Masarykown Volunteer Fire Department
7. Tri-County Volunteer Fire Department
8. Weeki Wachee #1
9. Weeki Wachee #2
10. Ridge Manor Ambulance Station

HERNANDO COUNTY
FLORIDA



TABLE 43
FIRE DEPARTMENTS IN LEVY COUNTY

Name	Location	Loss Zone	Employees Paid/ Volunteer	Value 2 \$
*Bronson Fire Department	Bronson	L5	0/14	3
*Cedar Key Fire Department	Cedar Key	L1	0/10	3
*Chiefland Volunteer Fire Department	Chiefland	L7	0/9	3
Fanning Springs Fire Department 1	Fanning Springs	L7	NA	3
*Inglis Volunteer Fire Department	Inglis	L3	NA	3
Morrison Fire Department 1	Morrison	L6	NA	4
Otter Creek Fire Department 1	Otter Creek	L4	NA	26,852
Rosewood Fire Department 1	Rosewood	L2	NA	4
*Williston Volunteer Fire Department	Williston	L6	0/19	3
*Yankeetown Fire Department	Yankeetown	L1	0/20	3
				26,852 ⁵

*Volunteer Departments

- 1 - Status unknown.
- 2 - Estimation provided by Levy County Property Appraiser's Office.
- 3 - Facility attached to City Hall.
- 4 - Facility attached to Police Department.
- 5 - This total not complete.

Sources: Levy County Property Appraiser's Office, 1987.
Florida Department of Insurance and Treasurer, 1987.

MAP 20 Fire and Ambulance Emergency Facilities Levy County

- KEY:**
- ◻ Fire only
 - ▲ Fire and Ambulance
 - Ambulance only
- SOURCES:** Florida Department of Insurance and Treasury, 1987.
Whitton/Donner Regional Planning Council, 1987.
- 11.** Whitton Ambulance Station
- 10.** Yulee Fire Department
- 9.** Yulee Fire Department and Ambulance Station
- 8.** Yulee Fire Department
- 7.** Yulee Fire Department
- 6.** Yulee Fire Department
- 5.** Yulee Fire Department
- 4.** Yulee Fire Department
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Map prepared by
Whitton/Donner Regional Planning Council

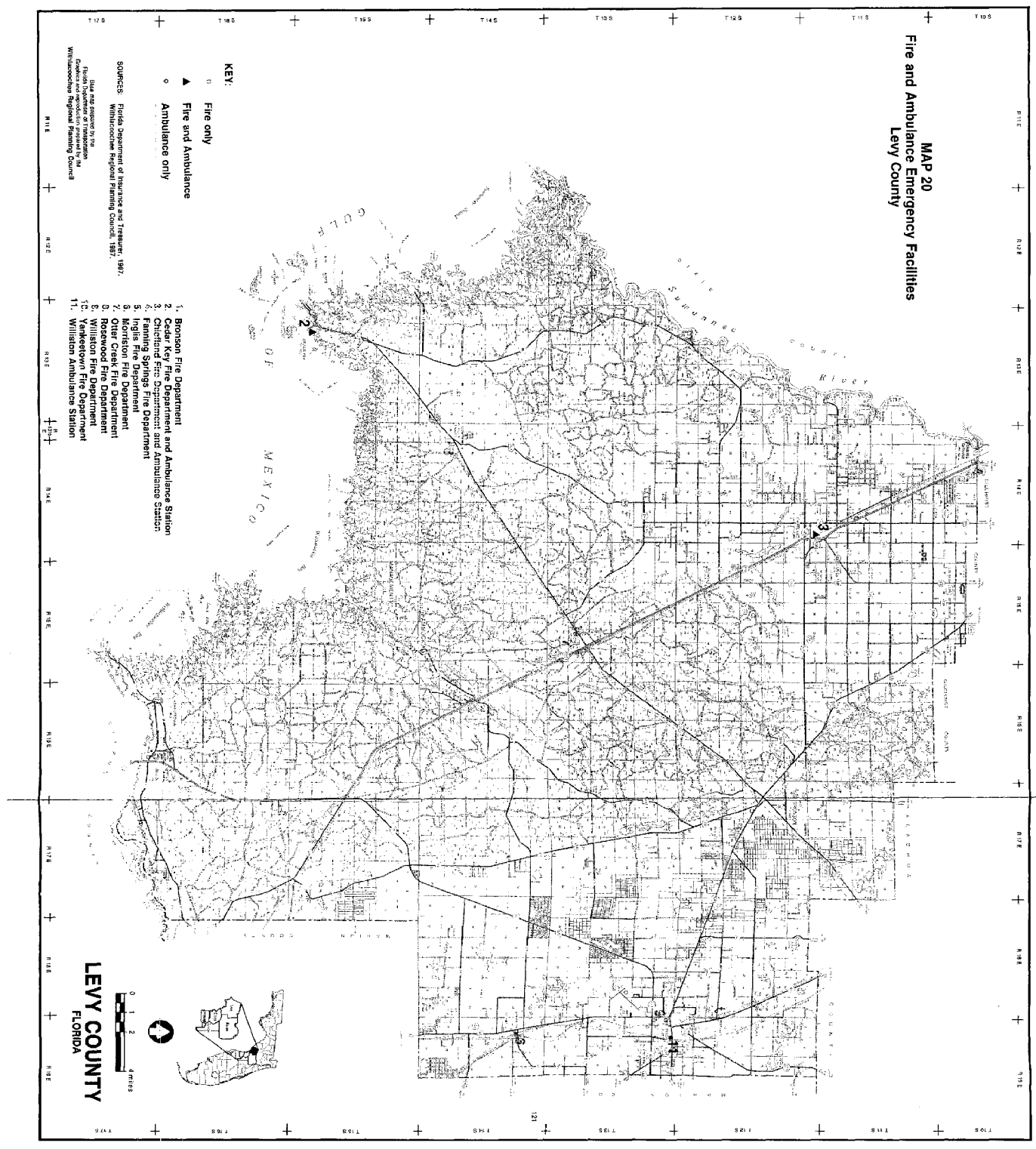
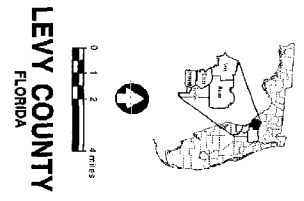


TABLE 44

FIRE DEPARTMENTS IN MARION COUNTY

Name	Location	Loss Zone	Employees Paid/ Volunteer	Value 2 \$
Anthony Fire Dept.	Anthony	M5	2/25	\$ 60,000
*Citra Fire Dept.	Citra	M5	0/18	35,000
Dunnellon Fire Dept.	Dunnellon	M1	NA	32,250
*East Marion Fire Dept.	Silver Springs	M6	0/35	3
*Electra Fire Dept.	Oklawaha	M6	0/34	4
Ft. McCoy/Eureka Fire Dept.	Ft. McCoy	M6	1/15	40,000
Florida Highlands Fire Dept.	Dunnellon	M1	NA	40,000
Hog Valley Fire Dept. 1	Ft. McCoy	M6	NA	4
*Lakeside Fire Dept.	Orange Lake	M4	0/14	50,000
*Lake Tropicana Volunteer Fire Dept.	Dunnellon	M2	0/12	32,452
Marion Oaks Fire Dept.	Marion Oaks	M4	6/20	117,000
*McIntosh Volunteer Fire Dept.	McIntosh	M4	NA	NA
North Marion Fire Dept.	Lowell	M4	2/40	15,797
Orange Springs Fire Dept.	Orange Springs	M5	2/12	76,196
Ocala Fire Dept. #1	Ocala	M5		192,167
#2	Ocala	M5	84/0	65,051
#3	Ocala	M5		118,452
*Oklawaha Volunteer Fire Dept.	Oklawaha	M6	NA	3

TABLE 44 CONTINUED
FIRE DEPARTMENTS IN MARION COUNTY

Name	Location	Loss Zone	Employees Paid/ Volunteer	Value 2 \$
*Pedro Area Volunteer Fire Dept.	Summerfield	M5	NA	4
*Rainbow Lakes Estates Fire Dept.	Dunnellon	M1	0/24	31,316
*Rolling Greens Fire Dept. 1	Ocala	M5	0/38	9,000 ⁵
Rolling Woods Fire Dept. 1	Altoona	M7	NA	4
Salt Springs Fire Dept.	Salt Springs	M7	1/5	107,800
Shady Fire Dept.	Ocala	M5	9/15	115,253
Silver Springs Shores Fire Dept.	Ocala	M5	6/32	152,129
South Forest Fire Dept. 1	Near Umatilla	M6	NA	4,000
South Marion Fire Dept.	Belleview	M5	6/40	22,000
*Sparr Fire Dept.	Sparr	M5	0/15	17,000
*Weirsdale Fire Dept.	Weirsdale	M6	0/18	4
West Marion Fire Dept.	Ocala	M5	2/26	3
				1,332,863 ⁶

*Volunteer Departments

- 1 - Status Unknown.
- 2 - Information supplied by Marion County Property Clerk/City of Ocala Fixed Assets Coordinator, 1987.
- 3 - Presently renting a facility.
- 4 - Building under construction.
- 5 - Also a community center and voting station.
- 6 - Total not complete.

Sources: Marion County Property Control Clerk, 1987.
City of Ocala Fixed Assets Coordinator, 1987.
Florida Department of Insurance and Treasurer, 1987.

1. Anthony Fire Department
2. Citra Fire Department
3. Dimillion Fire Department
4. Elberta Fire Department
5. Elberta Fire Department
6. Ft. McCoy/Eureka Fire Department
7. Florida Highlands Fire Department
8. Hog Valley Fire Department
9. Lakeside Fire Department
10. Lake Tropicana Fire Department
11. Marion Oaks Fire Department
12. North Marion Fire Department
13. Palm Springs Fire Department
14. Oklawaha Fire Department
15. Paddock Fire Department
16. Rainbow Lakes Estates Fire Department
17. Rolling Greens Fire Department
18. Rolling Woods Fire Department
19. Salt Springs Fire Department
20. Shady Fire Department/Fire Department
21. South Marion Fire Department
22. South Forest Fire Department
23. Spar Fire Department
24. West Marion Fire Department
25. West Marion Fire Department
26. West Marion Fire Department
27. McIntosh Volunteer Fire Department
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98. McIntosh Volunteer Fire Department
99. McIntosh Volunteer Fire Department
100. McIntosh Volunteer Fire Department

KEY:

Fire only

Fire and Ambulance

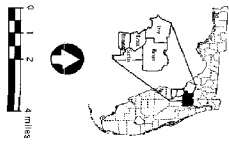
Ambulance only

SOURCES: Florida Department of Insurance and Treatment, 1987.
 Whitewater Regional Planning Council, 1987.

Map was prepared by the
 Florida Department of Insurance and Treatment
 Graphics and cartography created by the
 Whitewater Regional Planning Council

MAP 21
 Fire and Ambulance Emergency Facilities
 Marion County

MARION COUNTY
 FLORIDA



0 1 2 4 miles

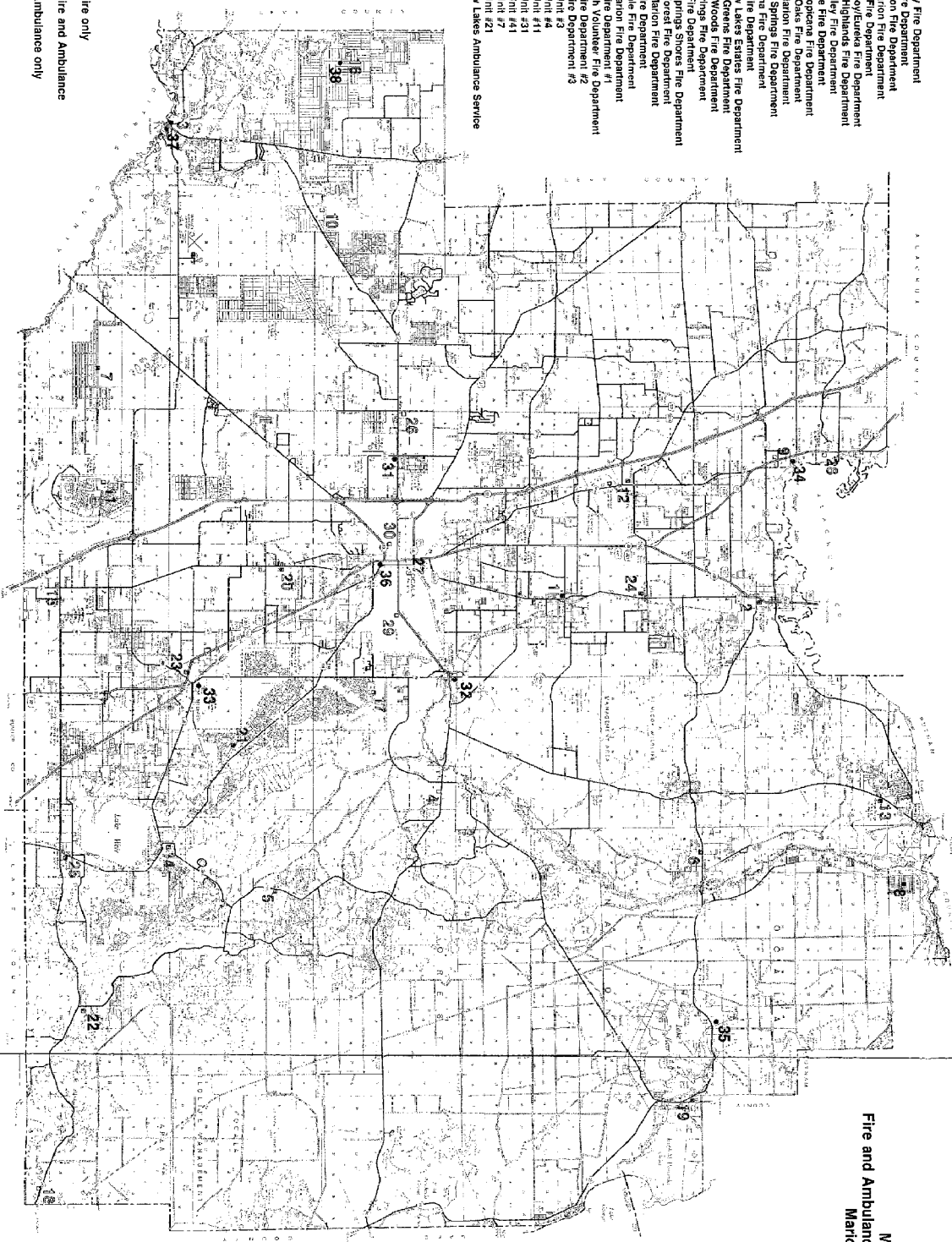


TABLE 45
FIRE DEPARTMENTS IN SUMTER COUNTY

Name	Location	Loss Zone	Employees Paid/ Volunteer	Value 2 \$
Wildwood Fire Station	Wildwood	S3	1/15	\$ 80,000
*Bushnell Volunteer Fire Department	Bushnell	S3	0/22	3
*Coleman Volunteer Fire Department	Coleman	S3	NA	30,000
*Lake Panasoffkee Volunteer Fire Dept.	Lake Panasoffkee	S3	0/20	75,000
*Webster Volunteer Fire Department	Webster	S3	NA	3
Center Hill Fire Department	Center Hill	S3	NA	20,000
Croom-a-Coochee Fire Department 1	Croom-a- Coochee	S2	NA	30,000
				235,000 ⁴

*Volunteer departments

- 1 - Status Unknown.
- 2 - Estimations provided by Sumter County Property Appraiser's Office.
- 3 - Facility attached to City Hall.
- 4 - This total not complete.

Sources: Sumter County Property Appraiser's Office, 1987.
Florida Department of Insurance and Treasurer, 1987.

MAP 22
Fire and Ambulance Emergency Facilities
Sumter County

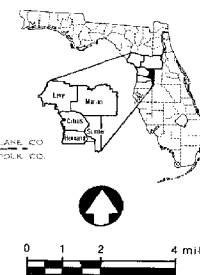
1. Lake Panasoffkee Volunteer Fire Department
2. Coleman Volunteer Fire Department
3. Wildwood Volunteer Fire Department
4. Bushnell Volunteer Fire Department
5. Webster Volunteer Fire Department
6. Center Hill Volunteer Fire Department
7. Croon-a-Coochee Fire Department
8. Wildwood Ambulance Station
9. Bushnell Ambulance Station

KEY:

- Fire only
- ▲ Fire and Ambulance
- Ambulance only

SOURCES: Florida Department of Insurance and Treasurer, 1987.
 Withlacoochee Regional Planning Council, 1987.

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



SUMTER COUNTY
FLORIDA

EMPLOYMENT AND INCOME STATISTICS FOR
COUNTIES IN THE WITHLACOOCHEE REGION

Industry	Average Monthly Employees	Total Annual Payroll (X \$1,000)	Daily Income Loss 1	Salary Per hour
<u>Citrus County</u>				
Manufacturing	704	\$ 9,574	\$ 36,682	\$ 6.44
Transportation Communications + Public Utils.	1,746	55,653	213,230	15.09
Wholesale Trade	241	3,110	11,916	6.11
Retail Trade	4,132	36,767	140,870	4.21
Finance, Insurance and Real Estate	829	11,590	44,406	6.62
Services	3,231	43,485	166,609	6.37
Government - Federal	119	2,894	11,088	11.51
State	168	2,404	9,211	6.77
Local	2,509	36,254	138,904	6.84
Total All Industries	15,864	253,290	772,916	7.56

1 - This figure represents daily income loss by hurricane induced inoperation for the whole county.

Sources: "Employment and Payrolls of Workers covered by the
Florida Unemployment Compensation Law...." Florida
Dept. of Labor and Employment Security, 1986
Withlacoochee Regional Planning Council, 1987.

EMPLOYMENT AND INCOME STATISTICS FOR
COUNTIES IN THE WITHLACOOCHEE REGION

Industry	Average Monthly Employees	Total Annual Payroll (X \$1,000)	Daily Income Loss 1	Salary Per hour
<u>Hernando County</u>				
Manufacturing	914	\$ 15,211	\$ 58,280	\$ 7.88
Transportation Communications + Public Utils.	531	10,207	39,107	9.10
Wholesale Trade	398	6,672	25,563	7.94
Retail Trade	3,509	32,849	125,858	4.43
Finance, Insurance and Real Estate	781	9,950	38,122	6.03
Services	2,873	37,158	142,368	6.12
Government - Federal	160	4,007	15,352	11.86
State	285	4,136	15,847	6.87
Local	2,173	32,840	125,823	7.16
Total All Industries	14,017	187,212	586,320	6.32

1 - This figure represents daily income loss by hurricane induced inoperation for the whole county.

Sources: "Employment and Payrolls of Workers covered by the
Florida Unemployment Compensation Law...." Florida
Dept. of Labor and Employment Security, 1986
Withlacoochee Regional Planning Council, 1987.

EMPLOYMENT AND INCOME STATISTICS FOR
COUNTIES IN THE WITHLACOOCHEE REGION

Industry	Average Monthly Employees	Total Annual Payroll (X \$1,000)	Daily Income Loss 1	Salary Per hour
<u>Levy County</u>				
Manufacturing	360	\$ 5,005	\$ 19,176	\$ 6.58
Transportation Communications + Public Utils.	132	2,872	11,004	10.30
Wholesale Trade	189	2,440	9,349	6.11
Retail Trade	889	7,361	28,203	3.94
Finance, Insurance and Real Estate	197	2,647	10,142	6.36
Services	622	8,242	31,579	6.27
Government - Federal	56	1,171	4,487	9.90
State	217	2,887	11,061	6.30
Local	852	12,288	47,080	6.83
Total All Industries	4,377	57,216	172,081	6.19

1 - This figure represents daily income loss by hurricane induced inoperation for the whole county.

Sources: "Employment and Payrolls of Workers covered by the
Florida Unemployment Compensation Law...." Florida
Dept. of Labor and Employment Security, 1986
Withlacoochee Regional Planning Council, 1987.

EMPLOYMENT AND INCOME STATISTICS FOR
COUNTIES IN THE WITHLACOOCHEE REGION

Industry	Average Monthly Employees	Total Annual Payroll (X \$1,000)	Daily Income Loss 1	Salary Per hour
<u>Marion County</u>				
Manufacturing	8,961	\$149,568	\$ 573,057	\$ 7.90
Transportation Communications + Public Utils.	1,492	29,646	113,586	9.41
Wholesale Trade	3,236	57,734	221,203	8.45
Retail Trade	11,677	117,489	450,149	4.76
Finance, Insurance and Real Estate	2,588	41,039	157,238	7.51
Services	7,696	104,791	401,498	6.45
Government - Federal	492	10,752	41,195	10.35
State	1,101	18,986	72,743	8.16
Local	6,695	97,098	372,022	6.87
Total All Industries	50,667	713,138	2,402,691	6.66

1 - This figure represents daily income loss by hurricane induced inoperation for the whole county.

Sources: "Employment and Payrolls of Workers covered by the
Florida Unemployment Compensation Law...." Florida
Dept. of Labor and Employment Security, 1986
Withlacoochee Regional Planning Council, 1987.

EMPLOYMENT AND INCOME STATISTICS FOR
COUNTIES IN THE WITHLACOOCHEE REGION

Industry	Average Monthly Employees	Total Annual Payroll (X \$1,000)	Daily Income Loss 1	Salary Per hour
<u>Sumter County</u>				
Manufacturing	764	\$ 11,590	\$ 44,215	\$ 7.15
Transportation Communications + Public Utils.	470	9,791	37,513	9.86
Wholesale Trade	136	1,192	4,567	4.15
Retail Trade	1,223	10,609	40,648	4.11
Finance, Insurance and Real Estate	210	3,015	11,552	6.80
Services	551	4,870	18,659	4.18
Government - Federal	57	1,280	4,904	10.63
State	487	8,914	34,153	8.67
Local	961	13,266	50,828	6.54
Total All Industries	5,643	74,269	247,039	6.23

1 - This figure represents daily income loss by hurricane induced inoperation for the whole county.

Sources: "Employment and Payrolls of Workers covered by the
Florida Unemployment Compensation Law...." Florida
Dept. of Labor and Employment Security, 1986
Withlacoochee Regional Planning Council, 1987.

APPENDIX H
TEMPORARY EMPLOYMENT LOSSES BY HURRICANE
CATEGORY AND LOSS ZONE FOR EACH COUNTY IN
THE WITHLACOOCHEE REGION

TEMPORARY EMPLOYMENT LOSSES FOR A CATEGORY ONE HURRICANE

Loss
Zone

Value of Employment Loss

Commercial Service Manufacturing

Citrus County

C1	\$3,469,830	\$ 0	\$ 46,215
C2	27,355	0	24,885
C3	14,910	0	13,035
C4	994	0	1,185
C5	30,814	0	33,180
C6	45,724	0	52,140
C7	83,496	0	28,440
C8	994	0	3,555
TOTAL	\$3,674,117	\$ 0	\$ 202,635

Hernando County

H1	\$ 8,246	\$ 74,553	\$ 2,143
H2	2,945	0	0
H3	26,505	17,125	0
H4	48,887	30,825	21,430
H5	116,622	84,255	100,721
H6	5,890	2,055	0
H7	5,301	8,905	2,143
H8	0	0	0
TOTAL	\$ 214,396	\$ 217,718	\$ 126,437

Levy County

L1	\$ 384,552	\$ 860,500	\$ 1,368
L2	11,634	0	0
L3	4,900	8,833	13,680
L4	2,100	4,818	2,736
L5	23,100	74,679	9,576
L6	9,100	24,090	8,208
L7	15,050	49,786	10,260
TOTAL	\$ 450,436	\$1,022,706	\$ 45,828

TEMPORARY EMPLOYMENT LOSSES FOR A CATEGORY ONE HURRICANE
(Continued)

Loss Zone	Value of Employment Loss		
	Commercial	Service	Manufacturing
<u>Marion County</u>			
M1	\$ 42,362	\$ 37,576	\$ 15,170
M2	1,436	2,684	6,068
M3	3,590	2,684	6,068
M4	124,932	129,503	424,760
M5	545,680	613,965	1,189,328
M6	45,234	43,615	63,714
M7	2,154	4,026	0
TOTAL	\$ 765,388	\$ 834,053	\$1,705,108
<u>Sumter County</u>			
S1	\$ 442	\$ 468	\$ 0
S2	2,652	5,616	11,155
S3	91,936	111,384	145,015
TOTAL	\$ 95,030	\$ 117,468	\$ 156,170

Source: Withlacoochee Regional Planning Council, 1987.

TEMPORARY EMPLOYMENT LOSSES FOR A CATEGORY TWO HURRICANE

Loss
Zone

Value of Employment Loss

Commercial Service Manufacturing

Citrus County

C1	\$5,002,902	\$ 0	\$ 261,573
C2	27,355	0	24,885
C3	14,910	0	13,055
C4	994	0	1,185
C5	30,814	0	33,180
C6	45,724	0	52,140
C7	83,496	0	28,440
C8	994	0	3,555
TOTAL	\$5,207,189	\$ 0	\$ 418,013

Hernando County

H1	\$ 299,166	\$ 74,553	\$ 8,464
H2	60,315	0	0
H3	26,505	17,125	0
H4	48,887	30,825	21,430
H5	116,622	84,255	100,721
H6	5,890	2,055	0
H7	5,301	8,905	2,143
H8	0	0	0
TOTAL	\$ 562,686	\$ 217,718	\$ 132,758

Levy County

L1	\$ 450,072	\$ 860,500	\$ 15,896
L2	31,938	0	0
L3	4,900	8,833	13,680
L4	2,100	4,818	2,736
L5	23,100	74,679	9,576
L6	9,100	24,090	8,208
L7	15,050	49,786	10,260
TOTAL	\$ 536,260	\$1,022,706	\$ 60,356

TEMPORARY EMPLOYMENT LOSSES FOR A CATEGORY TWO HURRICANE
(Continued)

Loss Zone	Value of Employment Loss		
	Commercial	Service	Manufacturing
<u>Marion County</u>			
M1	\$ 42,362	\$ 37,576	\$ 15,170
M2	1,436	2,684	6,068
M3	3,590	2,684	6,068
M4	124,932	129,503	424,760
M5	545,680	613,965	1,189,328
M6	45,234	43,615	63,714
M7	2,154	4,026	0
TOTAL	\$ 765,388	\$ 834,053	\$1,705,108
<u>Sumter County</u>			
S1	\$ 442	\$ 468	\$ 0
S2	2,652	5,616	11,155
S3	91,936	111,384	145,015
TOTAL	\$ 95,030	\$ 117,468	\$ 156,170

Source: Withlacoochee Regional Planning Council, 1987.

TEMPORARY EMPLOYMENT LOSSES FOR A CATEGORY
THREE HURRICANE

Loss
Zone

Value of Employment Loss

Commercial Service Manufacturing

Citrus County

C1	\$6,553,440	\$ 0	\$ 674,739
C2	510,070	0	47,040
C3	14,910	0	13,035
C4	994	0	1,185
C5	30,814	0	33,180
C6	45,724	0	52,140
C7	83,496	0	28,440
C8	994	0	3,555
TOTAL	\$7,240,442	\$ 0	\$ 853,314

Hernando County

H1	\$ 126,944	\$ 106,401	\$ 29,391
H2	87,170	0	0
H3	161,685	104,475	0
H4	48,887	30,825	21,430
H5	116,622	84,255	100,721
H6	5,890	2,055	0
H7	5,301	8,905	2,143
H8	0	0	0
TOTAL	\$ 552,499	\$ 336,916	\$ 153,685

Levy County

L1	\$1,753,488	\$3,352,520	\$ 66,962
L2	43,280	0	0
L3	49,980	90,101	69,770
L4	2,100	4,818	2,736
L5	23,100	74,679	9,576
L6	9,100	24,090	8,208
L7	15,050	49,786	10,260
TOTAL	\$1,896,098	\$3,595,994	\$ 167,512

TEMPORARY EMPLOYMENT LOSSES FOR A CATEGORY
THREE HURRICANE
(Continued)

Loss Zone	Value of Employment Loss		
	Commercial	Service	Manufacturing
<u>Marion County</u>			
M1	\$ 42,362	\$ 37,576	\$ 15,170
M2	1,436	2,684	6,068
M3	3,590	2,684	6,068
M4	124,932	129,503	424,760
M5	545,680	613,965	1,189,328
M6	45,234	43,615	63,714
M7	2,134	4,026	0
TOTAL	\$ 765,368	\$ 834,053	\$1,705,108
<u>Sumter County</u>			
S1	\$ 442	\$ 468	\$ 0
S2	2,652	5,616	11,155
S3	91,936	111,384	145,015
TOTAL	\$ 95,030	\$ 117,468	\$ 156,170

Source: Withlacoochee Regional Planning Council, 1987.

TEMPORARY EMPLOYMENT LOSSES FOR A CATEGORY
FOUR HURRICANE

Loss
Zone

Value of Employment Loss

Commercial

Service

Manufacturing

Citrus County

C1	\$ 9,189,330	\$ 0	\$1,466,868
C2	1,175,955	0	368,802
C3	257,640	0	84,733
C4	1,192	0	1,422
C5	39,652	0	39,816
C6	45,724	0	52,140
C7	83,496	0	28,440
C8	994	0	3,555
TOTAL	\$10,793,983	\$ 0	\$2,045,776

Hernando County

H1	\$ 585,928	\$ 146,019	\$ 63,347
H2	143,280	0	0
H3	773,415	499,700	0
H4	61,088	38,520	26,790
H5	116,622	84,255	100,721
H6	5,890	2,055	0
H7	5,301	8,905	2,143
H8	0	0	0
TOTAL	\$ 1,691,524	\$ 779,454	\$ 193,001

Levy County

L1	\$ 3,066,000	\$5,861,900	\$ 88,918
L2	120,036	0	0
L3	108,192	195,030	151,030
L4	2,100	4,818	2,736
L5	23,100	74,679	9,576
L6	9,100	24,090	8,208
L7	15,050	49,786	10,260
TOTAL	\$ 3,343,578	\$6,210,303	\$ 270,728

TEMPORARY EMPLOYMENT LOSSES FOR A CATEGORY
FOUR HURRICANE
(Continued)

Loss Zone	Value of Employment Loss		
	Commercial	Service	Manufacturing
<u>Marion County</u>			
M1	\$ 42,362	\$ 37,576	\$ 15,170
M2	1,436	2,684	6,068
M3	3,590	2,684	6,068
M4	124,932	129,503	424,760
M5	545,680	613,965	1,189,328
M6	45,234	43,615	63,714
M7	2,154	4,026	0
TOTAL	\$ 765,388	\$ 834,053	\$1,705,108
<u>Sumter County</u>			
S1	\$ 442	\$ 468	\$ 0
S2	2,652	5,616	11,155
S3	91,936	111,384	145,015
TOTAL	\$ 95,030	\$ 117,468	\$ 156,170

Source: Withlacoochee Regional Planning Council, 1987.

TEMPORARY EMPLOYMENT LOSSES FOR A CATEGORY
FIVE HURRICANE

Loss
Zone

Value of Employment Loss

Commercial Service Manufacturing

Citrus County

C1	\$11,297,796	\$ 0	\$2,463,981
C2	1,568,050	0	1,096,431
C3	687,690	0	497,673
C4	32,324	0	38,536
C5	904,704	0	974,176
C6	1,143,100	0	1,303,500
C7	1,728,384	0	588,720
C8	20,286	0	61,218
TOTAL	\$17,382,334	\$ 0	\$7,024,235

Hernando County

H1	\$ 1,097,376	\$ 273,480	\$ 116,283
H2	186,200	0	0
H3	1,432,395	925,475	0
H4	1,609,370	1,014,750	705,480
H5	3,022,866	2,183,865	2,610,709
H6	101,540	44,058	0
H7	73,152	153,517	36,945
H8	0	0	0
TOTAL	\$ 7,522,899	\$4,595,145	\$3,469,417

Levy County

L1	\$ 3,066,000	\$5,861,900	\$ 105,299
L2	146,056	0	0
L3	234,668	423,038	327,590
L4	56,406	129,414	73,488
L5	188,826	1,677,255	215,082
L6	175,812	465,420	158,580
L7	263,074	872,232	179,340
TOTAL	\$ 4,130,842	\$9,427,259	\$1,059,379

TEMPORARY EMPLOYMENT LOSSES FOR A CATEGORY
FIVE HURRICANE
(Continued)

Loss Zone	Value of Employment Loss		
	Commercial	Service	Manufacturing
<u>Marion County</u>			
M1	\$ 951,434	\$ 843,976	\$ 340,720
M2	28,146	52,608	118,932
M3	52,125	38,972	88,108
M4	1,436,718	1,489,381	4,884,740
M5	3,656,360	4,113,840	7,968,576
M6	96,327	92,885	135,702
M7	2,154	4,026	0
TOTAL	\$ 6,223,264	\$6,635,688	\$13,536,778
<u>Sumter County</u>			
S1	\$ 8,707	\$ 9,220	\$ 0
S2	44,658	94,572	187,850
S3	1,123,408	1,361,122	183,495
TOTAL	\$ 1,176,773	\$1,464,914	\$ 371,345

Source: Withlacoochee Regional Planning Council, 1987.

APPENDIX I
ANNUALIZED EMPLOYMENT AND SERVICE
DISRUPTION LOSSES BY LOSS ZONE FOR
EACH COUNTY IN THE WITHLACOOCHEE REGION

ANNUALIZED EMPLOYMENT AND
SERVICE DISRUPTION LOSS FOR A
CATEGORY ONE HURRICANE

Loss Zone	Commercial	ANNUALIZED LOSS Service	Manufacturing
<u>Citrus County</u>			
C1	\$1,196,493	\$ 0	\$ 15,936
C2	9,432	0	8,581
C3	5,141	0	4,494
C4	342	0	406
C5	10,625	0	11,441
C6	15,766	0	17,979
C7	28,791	0	9,806
C8	342	0	1,225
TOTAL	\$1,266,932	\$ 0	\$ 69,868
<u>Hernando County</u>			
H1	\$ 2,905	\$ 25,707	\$ 738
H2	1,015	0	0
H3	9,139	5,905	0
H4	16,857	10,629	7,389
H5	40,214	29,053	34,731
H6	2,031	708	0
H7	1,827	3,070	738
H8	0	0	0
TOTAL	\$ 73,988	\$ 75,072	\$ 43,596
<u>Levy County</u>			
L1	\$ 132,604	\$ 296,724	\$ 471
L2	4,011	0	0
L3	1,689	3,045	4,717
L4	724	1,601	943
L5	7,965	25,751	3,302
L6	3,137	8,306	2,830
L7	5,189	17,167	3,537
TOTAL	\$ 155,319	\$ 352,654	\$ 15,800

ANNUALIZED EMPLOYMENT AND
SERVICE DISRUPTION LOSS FOR A
CATEGORY ONE HURRICANE
(Continued)

Loss Zone	Commercial	ANNUALIZED LOSS Service	Manufacturing
<u>Marion County</u>			
M1	\$ 14,607	\$ 12,927	\$ 5,218
M2	495	923	2,087
M3	1,237	923	2,087
M4	43,080	44,552	146,129
M5	188,165	21,220	409,161
M6	15,597	15,004	21,919
M7	742	1,385	0
TOTAL	\$ 263,923	\$ 96,934	\$ 586,601
<u>Sumter County</u>			
S1	\$ 152	\$ 161	\$ 0
S2	912	1,932	3,837
S3	31,628	38,319	49,889
TOTAL	\$ 32,692	\$ 40,412	\$ 53,726

Source: Withlacoochee Regional Planning Council, 1987

ANNUALIZED EMPLOYMENT AND
SERVICE DISRUPTION LOSS FOR A
CATEGORY TWO HURRICANE

Loss Zone	Commercial	ANNUALIZED LOSS Service	Manufacturing
<u>Citrus County</u>			
C1	\$ 862,569	\$ 0	\$ 45,098
C2	4,716	0	4,290
C3	2,570	0	2,550
C4	171	0	204
C5	5,312	0	5,720
C6	7,883	0	8,989
C7	14,395	0	4,903
C8	171	0	612
TOTAL	\$ 897,787	\$ 0	\$ 72,366
<u>Hernando County</u>			
H1	\$ 51,580	\$ 12,853	\$ 1,459
H2	10,399	0	0
H3	4,569	2,952	0
H4	8,428	5,314	3,694
H5	20,107	14,526	17,365
H6	1,015	354	0
H7	913	1,535	369
H8	0	0	0
TOTAL	\$ 97,011	\$ 37,534	\$ 22,887
<u>Levy County</u>			
L1	\$ 77,598	\$ 14,836	\$ 2,740
L2	5,506	0	0
L3	844	1,522	2,358
L4	362	830	471
L5	3,982	12,875	1,651
L6	1,568	4,153	1,415
L7	2,594	8,583	1,768
TOTAL	\$ 92,454	\$ 42,799	\$ 10,403

ANNUALIZED EMPLOYMENT AND
SERVICE DISRUPTION LOSS FOR A
CATEGORY TWO HURRICANE
(Continued)

Loss Zone	Commercial	ANNUALIZED LOSS Service	Manufacturing
<u>Marion County</u>			
M1	\$ 7,303	\$ 6,476	\$ 2,615
M2	247	462	1,046
M3	618	462	1,046
M4	21,540	22,328	73,234
M5	94,082	105,856	205,056
M6	7,798	7,159	10,985
M7	371	694	0
TOTAL	\$ 131,959	\$ 143,437	\$ 293,982
<u>Sumter County</u>			
S1	\$ 76	\$ 80	\$ 0
S2	457	968	1,923
S3	15,851	19,204	25,002
TOTAL	\$ 16,384	\$ 20,252	\$ 26,925

Source: Withlacoochee Regional Planning Council, 1987

ANNUALIZED EMPLOYMENT AND
SERVICE DISRUPTION LOSS FOR A
CATEGORY THREE HURRICANE

Loss Zone	Commercial	ANNUALIZED LOSS Service	Manufacturing
<u>Citrus County</u>			
C1	\$ 392,421	\$ 0	\$ 40,403
C2	30,543	0	2,816
C3	892	0	780
C4	59	0	70
C5	1,845	0	1,986
C6	2,737	0	3,122
C7	4,999	0	1,702
C8	59	0	212
TOTAL	\$ 433,555	\$ 0	\$ 51,091
<u>Hernando County</u>			
H1	\$ 25,565	\$ 6,371	\$ 1,759
H2	5,219	0	0
H3	9,681	6,255	0
H4	2,927	1,845	1,283
H5	6,983	5,045	6,031
H6	352	123	0
H7	317	533	128
H8	0	0	0
TOTAL	\$ 51,044	20,172	9,201
<u>Levy County</u>			
L1	\$ 105,178	\$ 200,749	\$ 4,009
L2	2,916	0	0
L3	2,992	5,395	4,177
L4	125	288	163
L5	1,383	4,471	573
L6	544	1,442	491
L7	901	2,981	614
TOTAL	\$ 114,039	\$ 215,326	\$ 10,027

ANNUALIZED EMPLOYMENT AND
SERVICE DISRUPTION LOSS FOR A
CATEGORY THREE HURRICANE
(Continued)

Loss Zone	Commercial	ANNUALIZED LOSS Service	Manufacturing
<u>Marion County</u>			
M1	\$ 2,536	\$ 2,250	\$ 908
M2	85	160	363
M3	214	160	363
M4	7,480	7,754	25,434
M5	32,675	36,764	71,217
M6	2,708	2,611	3,815
M7	127	241	0
TOTAL	\$ 45,825	\$ 49,940	\$ 102,100
<u>Sumter County</u>			
S1	\$ 26	\$ 28	\$ 0
S2	158	336	667
S3	5,505	6,669	868
TOTAL	\$ 5,689	\$ 7,033	\$ 1,535

Source: Withlacoochee Regional Planning Council, 1987

ANNUALIZED EMPLOYMENT AND
SERVICE DISRUPTION LOSS FOR A
CATEGORY FOUR HURRICANE

Loss Zone	Commercial	ANNUALIZED LOSS Service	Manufacturing
<u>Citrus County</u>			
C1	\$ 45,491	\$ 0	\$ 7,261
C2	5,821	0	1,825
C3	1,275	0	419
C4	5	0	7
C5	196	0	197
C6	226	0	258
C7	413	0	140
C8	4	0	17
TOTAL	\$ 53,431	\$ 0	\$ 10,124
<u>Hernando County</u>			
H1	\$ 2,900	\$ 722	\$ 313
H2	709	0	0
H3	3,828	2,473	0
H4	302	190	132
H5	577	417	498
H6	29	10	0
H7	26	44	10
H8	0	0	0
TOTAL	\$ 8,371	\$ 3,856	\$ 953
<u>Levy County</u>			
L1	\$ 15,178	\$ 29,019	\$ 440
L2	594	0	0
L3	535	965	747
L4	10	23	13
L5	114	369	47
L6	45	119	40
L7	74	246	50
TOTAL	\$ 16,550	\$ 30,741	\$ 1,337

ANNUALIZED EMPLOYMENT AND
SERVICE DISRUPTION LOSS FOR A
CATEGORY FOUR HURRICANE
(Continued)

Loss Zone	Commercial	ANNUALIZED LOSS Service	Manufacturing
<u>Marion County</u>			
M1	\$ 209	\$ 186	\$ 75
M2	7	13	30
M3	17	13	30
M4	618	641	2,102
M5	2,701	3,039	5,887
M6	223	215	315
M7	10	19	0
TOTAL	\$ 3,785	\$ 4,126	\$ 8,439
<u>Sumter County</u>			
S1	\$ 2	\$ 2	\$ 0
S2	13	27	55
S3	455	551	717
TOTAL	\$ 470	\$ 580	\$ 772

Source: Withlacoochee Regional Planning Council, 1987

ANNUALIZED EMPLOYMENT AND
SERVICE DISRUPTION LOSS FOR A
CATEGORY FIVE HURRICANE

Loss Zone	ANNUALIZED LOSS		
	Commercial	Service	Manufacturing
<u>Citrus County</u>			
C1	\$ 7,531	\$ 0	\$ 1,642
C2	1,045	0	730
C3	458	0	331
C4	21	0	25
C5	603	0	649
C6	762	0	869
C7	1,152	0	392
C8	13	0	40
TOTAL	\$ 11,585	\$ 0	\$ 4,678
<u>Hernando County</u>			
H1	\$ 731	\$ 182	\$ 77
H2	124	0	0
H3	954	616	0
H4	1,072	676	470
H5	2,015	1,455	1,740
H6	67	29	0
H7	48	102	24
H8	0	0	0
TOTAL	\$ 5,011	\$ 3,060	\$ 2,311
<u>Levy County</u>			
L1	\$ 2,044	\$ 387	\$ 70
L2	97	0	0
L3	156	282	218
L4	37	86	49
L5	125	1,118	143
L6	117	310	105
L7	175	580	119
TOTAL	\$ 2,751	\$ 2,763	\$ 704

ANNUALIZED EMPLOYMENT AND
SERVICE DISRUPTION LOSS FOR A
CATEGORY FIVE HURRICANE
(Continued)

Loss Zone	Commercial	ANNUALIZED LOSS Service	Manufacturing
<u>Marion County</u>			
M1	\$ 634	\$ 562	\$ 227
M2	18	35	79
M3	34	25	58
M4	957	992	3,256
M5	2,437	2,742	5,312
M6	64	61	90
M7	1	2	0
TOTAL	\$ 4,145	\$ 4,419	\$ 9,092
<u>Sumter County</u>			
S1	\$ 5	\$ 6	\$ 0
S2	29	63	125
S3	84	907	122
TOTAL	\$ 118	\$ 976	\$ 247

Source: Withlacoochee Regional Planning Council, 1987

VALUES OF LOSS FOR A CATEGORY TWO HURRICANE CONTINUED

Loss Zone	VALUE OF LOSS (\$)					1
	M	A	GI	HC	PT	U
<u>Citrus County</u>						
C1	764,780	3,850,887	6,695,305	357,818	37,325	24,854,928
C2	202,155	352,122	44,962	33,543	27	11,249
C3	109,870	83,096	41,575	0	440	11,885
C4	748	260,632	43,555	0	1,129	0
C5	92,339	1,018,432	594,383	85,483	350	42,979
C6	96,022	798,218	1,532,839	0	668	7,108
C7	65,215	1,507,552	655,328	114,020	13,716	28,786
C8	4,793	229,483	1,804	0	10	4,763
TOTAL	1,335,922	8,100,422	9,609,751	590,866	54,665	24,961,698
<u>Hernando County</u>						
H1	26,625	604,290	333,597	0	0	112,253
H2	0	162,463	62,746	0	0	5,649
H3	0	210,496	67,018	0	0	5,452
H4	39,970	856,734	523,666	326,348	0	0
H5	178,653	2,214,643	919,605	46,759	377	58,637
H6	0	1,981,881	704,039	46	29	3,288
H7	47,500	488,044	266,750	0	0	7
H8	0	63,355	389,052	0	0	0
TOTAL	292,748	6,581,906	3,266,473	373,153	406	185,286

VALUES OF LOSS FOR A CATEGORY TWO HURRICANE CONTINUED

Loss Zone	M	VALUE OF LOSS (\$)			HC	PT	¹ U
		A	GI				
<u>Levy County</u>							
L1	20,530	1,446,394	1,271,555	0	2,411	21,843	
L2	0	811,946	75,865	0	0	14,342	
L3	37,989	934,946	24,230	0	0	53,193	
L4	2,825	1,706,320	53,966	2,969	0	0	
L5	14,837	1,176,613	181,145	0	72	2,744	
L6	19,299	276,768	91,654	13,379	0	941	
L7	34,671	721,178	247,959	0	90	35,108	
TOTAL	130,151	7,074,165	1,946,374	16,348	2,573	128,171	
<u>Marion County</u>							
M1	9,712	847,535	266,849	0	60	12,203	
M2	827	2,778,148	227,384	0	0	3,552	
M3	2,028	4,559,755	114,224	0	4,123	10,361	
M4	670,301	4,635,543	729,253	0	883,609	40,675	
M5	1,981,705	8,044,960	2,916,689	685,412	164,736	154,554	
M6	19,881	2,046,879	5,319,763	0	10,813	16,031	
M7	0	232,316	1,319,157	0	82	0	
TOTAL	2,684,454	23,145,136	10,893,319	685,412	1,063,423	237,376	
<u>Sumter County</u>							
S1	0	173,588	448	0	0	176	
S2	4,875	1,246,227	65,213	0	2,908	0	
S3	242,855	4,814,373	462,277	17,700	1,874	38,525	
TOTAL	247,730	6,234,188	527,938	17,700	4,782	38,701	

VALUES OF LOSS FOR A CATEGORY THREE HURRICANE

Loss Zone	SF	VALUE OF LOSS (\$)			
		MF	MH	C	S
<u>Citrus County</u>					
C1	181,821,460	15,110,551	38,295,181	13,671,968	13,214,347
C2	8,424,040	170,529	8,074,678	888,071	533,335
C3	3,178,297	41,080	2,817,400	121,992	75,381
C4	1,470,974	8,272	1,196,925	17,309	31,112
C5	21,623,320	771,048	5,681,017	330,725	109,312
C6	5,756,313	900,536	6,503,608	340,725	292,867
C7	15,414,663	531,233	3,984,769	1,200,549	540,231
C8	635,399	0	651,778	3,233	12,768
TOTAL	238,324,466	17,533,249	67,205,356	16,474,572	14,809,353
<u>Hernando County</u>					
H1	50,998,541	354,844	338,026	569,926	167,845
H2	64,097	0	235,226	329,150	0
H3	21,388,297	1,011,187	1,582,917	2,949,353	857,355
H4	41,715,864	703,030	16,180,059	771,356	630,900
H5	6,981,919	498,901	1,762,246	1,621,680	766,409
H6	2,507,631	4,449	1,351,209	27,417	37,743
H7	2,880,038	4,743	595,211	46,060	132,698
H8	1,485	0	2,096	0	0
TOTAL	126,537,872	2,577,154	22,046,990	6,314,942	2,592,950

VALUE OF LOSS FOR A CATEGORY THREE HURRICANE CONTINTUED

Loss Zone	SF	VALUE OF LOSS (\$)			
		MF	MH	C	S
<u>Levy County</u>					
L1	19,546,548	2,922,977	1,461,344	926,128	1,548,684
L2	2,278,683	0	209,508	99,067	0
L3	5,014,492	28,393	4,249,725	468,604	103,936
L4	1,034,017	0	510,382	6,268	20,664
L5	2,998,895	54,657	1,084,881	152,718	134,453
L6	996,472	37,036	268,636	76,423	48,079
L7	1,507,597	26,581	843,131	88,070	184,912
TOTAL	33,376,704	3,069,644	8,627,607	1,817,278	2,040,728
<u>Marion County</u>					
M1	5,238,458	162,016	579,776	310,640	284,759
M2	891,315	0	600,855	1,438	5,902
M3	1,982,582	191,428	809,162	7,360	11,864
M4	11,880,605	1,305,068	1,922,144	1,225,550	1,441,823
M5	46,163,771	5,446,075	4,792,222	5,404,453	4,393,040
M6	4,092,986	26,635	2,608,213	97,606	130,656
M7	311,619	5,255	188,238	6,470	34,559
TOTAL	70,561,336	7,136,477	11,500,610	7,053,517	6,302,603
<u>Sumter County</u>					
S1	117,536	0	245,520	1,560	2,824
S2	752,192	6,604	697,534	6,565	33,938
S3	6,674,338	317,770	2,165,048	390,146	812,014
TOTAL	7,544,066	324,374	3,108,102	398,271	848,776

VALUES OF LOSS FOR A CATEGORY THREE HURRICANE CONTINUED

Loss Zone	VALUE OF LOSS (\$)						¹
	M	A	GI	HC	PT	U	
<u>Citrus County</u>							
C1	1,107,999	5,503,209	9,563,935	377,500	50,872	34,584,339	
C2	587,310	1,088,785	139,029	68,022	86	34,785	
C3	206,161	159,346	79,725	0	843	22,792	
C4	1,297	451,894	75,518	0	1,957	0	
C5	157,159	1,733,331	1,011,619	733,053	595	73,150	
C6	159,642	1,327,079	2,548,424	0	1,110	11,818	
C7	103,091	2,383,117	1,035,933	180,241	21,682	45,505	
C8	7,233	346,293	2,722	0	15	7,187	
TOTAL	2,329,892	12,993,054	14,456,905	1,412,030	77,160	34,779,576	
<u>Hernando County</u>							
H1	41,610	909,588	485,917	0	0	155,753	
H2	0	495,995	191,564	0	0	17,247	
H3	0	460,585	146,643	0	0	11,931	
H4	69,343	1,486,306	908,482	566,166	628	0	
H5	297,756	3,691,072	1,532,675	77,932	48	97,730	
H6	0	3,179,626	1,129,525	73	0	5,275	
H7	71,678	736,464	402,529	0	0	11	
H8	0	94,740	581,778	0	0	0	
TOTAL	480,087	11,054,376	5,379,113	644,171	676	287,947	

VALUES OF LOSS FOR A CATEGORY THREE HURRICANE CONTINUED

Loss Zone	M	VALUE OF LOSS (\$)		HC	PT	1 U
		A	GI			
<u>Levy County</u>						
L1	51,812	2,020,999	1,732,297	0	0	30,121
L2	0	1,172,512	109,555	0	0	20,711
L3	63,551	1,564,057	40,533	0	0	88,986
L4	4,811	2,906,076	91,911	5,057	0	0
L5	24,441	1,938,239	298,400	0	0	4,521
L6	30,760	441,137	146,094	21,325	0	1,501
L7	53,387	1,110,487	381,814	0	0	54,060
TOTAL	228,762	11,153,507	2,800,606	26,382	0	199,900
<u>Marion County</u>						
M1	15,998	1,396,147	439,581	0	98	20,102
M2	1,298	4,362,180	357,032	0	0	5,577
M3	3,056	6,870,580	172,112	0	6,213	15,611
M4	1,000,774	6,920,973	1,088,791	0	1,319,249	60,729
M5	2,905,218	11,794,068	4,275,923	1,004,827	241,506	226,579
M6	28,285	2,912,055	7,568,323	0	15,384	22,807
M7	0	318,172	2,158,620	0	112	0
TOTAL	3,954,629	34,574,175	16,060,382	1,004,827	1,582,562	351,405
<u>Sumter County</u>						
S1	0	269,176	695	0	0	273
S2	7,509	1,919,863	100,463	0	131,000	0
S3	361,432	7,165,052	687,990	26,343	88,000	57,335
TOTAL	368,941	9,354,091	789,148	26,343	219,000	57,608

VALUES OF LOSS FOR A CATEGORY FOUR HURRICANE

Loss Zone	SF	VALUE OF LOSS (\$)			C	S
		MF	MH			
<u>Citrus County</u>						
C1	217,924,058	20,393,251	38,295,181	20,482,536	19,809,735	
C2	16,284,016	331,013	15,474,637	1,530,775	919,314	
C3	8,740,318	104,417	8,935,236	338,892	209,409	
C4	2,543,006	14,734	3,409,451	31,125	55,948	
C5	39,123,418	1,441,379	17,612,978	624,873	206,535	
C6	9,740,076	1,550,925	18,093,969	592,896	509,619	
C7	25,348,436	885,439	10,678,170	1,854,517	910,335	
C8	1,038,679	0	1,735,409	5,424	21,421	
TOTAL	320,742,007	24,721,158	114,235,031	25,461,038	22,642,316	
<u>Hernando County</u>						
H1	51,129,884	431,003	338,026	847,383	249,031	
H2	130,745	0	533,361	599,298	0	
H3	45,795,646	2,182,497	3,859,757	6,175,472	1,795,165	
H4	72,122,864	1,254,338	46,647,914	1,389,454	1,136,367	
H5	11,793,348	864,763	4,933,370	2,839,918	1,342,152	
H6	4,128,727	7,455	3,650,075	46,439	63,929	
H7	4,707,959	7,865	1,584,796	77,271	222,617	
H8	2,366	0	5,420	0	0	
TOTAL	189,811,539	4,747,921	61,552,719	11,975,235	4,809,261	

VALUE OF LOSS FOR A CATEGORY FOUR HURRICANE CONTINUED

Loss Zone	SF	VALUE OF LOSS (\$)			C	S
		MF	MH			
<u>Levy County</u>						
L1	19,546,548	4,366,563	1,461,344	1,046,616	1,783,519	
L2	2,384,308	0	209,508	170,718	0	
L3	7,617,136	44,321	5,240,752	605,384	134,274	
L4	1,768,753	0	1,345,348	11,143	36,732	
L5	5,028,117	93,736	3,000,313	264,661	233,007	
L6	1,644,349	62,023	724,333	129,396	81,404	
L7	2,479,039	44,130	2,243,895	147,795	310,312	
TOTAL	40,468,250	4,610,763	4,225,493	2,375,713	2,579,248	
<u>Marion County</u>						
M1	8,783,092	277,855	1,603,410	538,338	493,486	
M2	1,462,869	0	1,607,466	2,422	9,942	
M3	3,224,460	315,326	2,134,164	12,266	19,773	
M4	18,826,189	2,101,515	4,932,698	1,996,769	2,349,138	
M5	70,048,094	8,396,032	12,316,995	8,428,799	6,851,397	
M6	5,771,927	38,090	6,335,881	141,105	188,883	
M7	408,072	7,020	427,814	8,730	46,628	
TOTAL	108,524,703	11,135,838	29,358,428	11,128,429	9,959,247	
<u>Sumter County</u>						
S1	192,370	0	651,991	2,615	4,733	
S2	1,227,188	10,675	1,854,315	10,731	55,472	
S3	10,499,397	507,265	6,224,470	631,373	1,314,079	
TOTAL	11,918,955	517,940	8,730,776	644,719	1,374,284	

VALUES OF LOSS FOR A CATEGORY FOUR HURRICANE CONTINUED

Loss Zone	VALUE OF LOSS (\$)						1
	M	A	GI	HC	PT	U	
<u>Citrus County</u>							
C1	1,627,068	8,024,636	13,500,654	662,234	78,465	48,101,558	
C2	985,016	1,743,845	222,675	108,947	140	55,713	
C3	442,363	352,616	176,424	0	1,870	50,437	
C4	2,333	812,618	135,801	0	3,525	0	
C5	296,938	3,274,958	1,911,354	274,889	1,127	138,210	
C6	277,794	2,309,249	4,434,512	0	1,934	70,565	
C7	173,718	4,015,751	1,745,634	303,722	36,538	76,680	
C8	12,135	580,946	4,568	0	27	15,058	
TOTAL	3,817,365	21,114,619	22,131,622	1,349,792	123,626	48,508,221	
<u>Hernando County</u>							
H1	74,923	1,252,945	664,933	0	0	210,949	
H2	0	850,785	328,591	0	0	29,584	
H3	0	898,734	286,145	0	0	23,282	
H4	124,909	2,677,299	1,636,458	1,019,842	0	0	
H5	521,438	6,463,878	2,684,050	136,477	1,099	171,147	
H6	0	5,385,547	1,913,151	125	79	8,936	
H7	120,248	1,235,502	675,288	0	0	17	
H8	0	155,162	500,778	0	0	0	
TOTAL	841,518	18,919,852	8,689,394	1,156,444	1,178	443,915	

VALUES OF LOSS FOR A CATEGORY FOUR HURRICANE CONTINUED

Loss Zone	M	A	VALUE OF LOSS (\$)		HC	PT	1 U
<u>Levy County</u>							
L1	74,318	2,727,758	2,323,862		0	4,564	40,528
L2	0	1,608,420	150,285		0	0	28,411
L3	94,074	2,315,270	60,004		0	0	131,726
L4	8,552	5,165,617	163,374	8,990		0	0
L5	42,357	3,358,964	517,128	0		206	7,935
L6	52,082	746,912	247,359	36,107		0	2,541
L7	89,592	1,863,575	640,745	0		233	90,721
TOTAL	360,975	17,786,516	4,102,757	45,097		5,003	301,862
<u>Marion County</u>							
M1	27,725	2,419,519	761,793	0		170	34,836
M2	2,186	7,347,470	601,370	0		0	9,394
M3	5,094	11,450,967	286,853	0		10,356	26,019
M4	1,630,545	11,276,227	1,773,949	0	2,149,430		98,944
M5	4,530,986	18,394,059	6,668,741	1,567,131		376,653	353,374
M6	40,890	4,209,818	10,941,163	0		22,240	32,971
M7	0	429,280	2,912,424	0		151	0
TOTAL	6,237,426	55,527,340	23,946,293	1,567,131	2,559,000		555,538
<u>Sumter County</u>							
S1	0	451,176	1,166	0		0	458
S2	12,274	3,138,022	164,208	0		7,322	0
S3	584,904	11,595,180	1,113,371	42,632		4,514	92,786
TOTAL	597,178	15,184,378	1,278,745	42,632		11,836	93,244

VALUES OF LOSS FOR A CATEGORY FIVE HURRICANE

Loss Zone	SF	VALUE OF LOSS (\$)		C	S
		MF	MH		
<u>Citrus County</u>					
C1	217,924,058	22,471,22	38,295,181	22,804,157	22,058,005
C2	19,755,701	477,095	19,962,123	2,176,118	1,797,966
C3	9,667,493	212,191	17,564,843	651,328	402,470
C4	6,366,723	41,632	8,932,283	90,189	162,113
C5	92,882,709	3,813,559	45,594,042	1,690,206	558,653
C6	24,412,856	4,333,019	58,067,939	1,688,448	1,451,291
C7	65,132,504	2,543,497	42,256,312	2,415,529	2,663,850
C8	2,629,524	0	7,997,284	15,549	61,404
TOTAL	438,771,568	33,892,213	238,670,003	31,531,524	29,155,752

Hernando County

H1	51,129,884	431,003	338,026	883,837	282,378
H2	161,832	0	579,804	864,065	0
H3	70,551,863	3,978,945	6,131,466	10,684,770	3,106,185
H4	180,711,050	3,549,704	119,763,582	4,035,311	3,300,286
H5	29,691,900	2,417,299	15,363,970	5,513,695	1,485,881
H6	10,575,115	21,333	13,915,652	135,380	186,366
H7	11,918,682	22,138	7,303,213	221,639	638,538
H8	5,797	0	26,430	0	0
TOTAL	354,746,123	10,420,422	163,422,143	22,338,697	8,999,634

VALUES OF LOSS FOR A CATEGORY FIVE HURRICANE CONTINUED

Loss Zone	SF	VALUE OF LOSS (\$)			
		MF	MH	C	S
<u>Levy County</u>					
L1	19,546,548	4,366,563	1,461,344	1,046,616	1,783,519
L2	2,384,308	0	209,508	186,251	0
L3	8,029,084	53,268	5,240,752	769,403	170,054
L4	4,225,853	0	3,761,108	30,093	99,200
L5	12,146,947	250,590	9,934,812	720,508	634,336
L6	4,036,902	169,181	2,812,944	359,295	226,307
L7	6,073,385	120,505	9,548,491	413,525	868,237
TOTAL	56,443,027	4,960,107	32,968,959	3,525,691	3,781,653
<u>Marion County</u>					
M1	21,218,233	742,805	5,309,306	1,465,562	1,343,458
M2	3,596,156	0	6,481,719	6,747	27,698
M3	7,690,798	829,335	9,585,531	32,621	52,586
M4	43,318,513	5,263,644	22,513,478	5,058,736	5,951,450
M5	150,386,271	19,113,629	54,774,114	19,416,660	15,782,941
M6	12,396,937	85,958	27,611,284	322,879	432,207
M7	876,983	15,746	1,800,341	19,899	106,289
TOTAL	239,483,891	26,051,117	128,075,773	26,323,104	23,696,629
<u>Sumter County</u>					
S1	496,887	0	2,727,996	7,690	13,918
S2	3,092,347	29,868	8,665,023	30,560	157,982
S3	25,266,208	1,332,300	30,798,675	1,675,045	3,486,280
TOTAL	28,855,442	1,362,168	42,191,694	1,713,295	3,658,180

VALUES OF LOSS FOR A CATEGORY FIVE HURRICANE CONTINUED

Loss Zone	VALUE OF LOSS (\$)						¹ U
	M	A	GI	HC	PT		
<u>Citrus County</u>							
C1	2,527,036	12,574,443	21,832,030	868,579	123,077	74,329,859	
C2	1,926,463	3,410,560	435,502	317,230	274	108,964	
C3	1,094,180	842,171	421,364	0	4,467	120,463	
C4	6,761	2,354,611	393,493	0	10,216	0	
C5	803,182	8,858,363	5,214,416	743,541	3,049	373,843	
C6	791,103	6,576,271	12,628,583	0	5,511	58,567	
C7	508,341	11,751,010	1,108,126	888,761	106,922	224,387	
C8	34,787	1,665,313	13,097	0	80	34,567	
TOTAL	7,691,853	48,032,742	42,046,611	2,818,111	253,596	75,250,650	
<u>Hernando County</u>							
H1	91,063	2,175,041	1,127,060	0	0	342,351	
H2	0	1,675,759	647,215	0	0	58,272	
H3	0	1,818,586	579,014	0	0	47,112	
H4	362,767	7,775,524	4,752,674	2,961,869	0	0	
H5	2,384,027	18,419,353	7,648,423	388,904	3,136	487,697	
H6	0	15,699,949	5,577,222	364	230	26,052	
H7	344,912	3,543,824	1,936,949	0	0	51	
H8	0	422,372	2,593,687	0	0	0	
TOTAL	3,182,769	51,530,408	24,862,244	3,351,137	3,366	961,535	

VALUES OF LOSS FOR A CATEGORY FIVE HURRICANE CONTINUED

Loss Zone	VALUE OF LOSS (\$)						1 U
	M	A	GI	HC	PT		
<u>Levy County</u>							
L1	89,943	4,017,832	3,367,186	0	6,734	59,195	
L2	0	2,532,035	236,584	0	0	44,726	
L3	158,429	3,899,097	101,052	0	0	221,838	
L4	23,098	13,950,500	441,215	24,280	0	0	
L5	115,313	9,144,390	407,821	0	501	21,332	
L6	144,617	2,073,950	685,641	100,084	0	7,044	
L7	250,674	5,214,183	792,771	0	653	253,834	
TOTAL	782,074	40,831,987	6,032,270	124,364	7,888	607,969	
<u>Marion County</u>							
M1	75,479	6,586,859	2,073,894	0	464	94,837	
M2	6,091	20,470,564	1,675,459	0	0	26,172	
M3	13,547	30,453,383	762,874	0	1,278	69,195	
M4	4,130,922	28,567,879	4,494,231	0	1,300	250,671	
M5	10,437,621	42,372,727	15,362,174	3,610,057	1,052	814,036	
M6	93,565	9,632,993	25,035,793	0	524	75,445	
M7	0	978,505	6,638,614	0	343	0	
TOTAL	14,757,225	139,062,910	56,043,039	3,610,057	4,961	1,330,356	
<u>Sumter County</u>							
S1	0	1,326,762	4,858	0	0	1,347	
S2	34,957	8,936,908	67,655	0	20,852	0	
S3	1,551,763	30,762,260	2,856,134	109,363	11,579	238,023	
TOTAL	1,586,720	41,025,930	2,928,647	109,363	32,431	239,370	

1 - V = Vacant Land M = Manufacturing
 SF = Single family residential A = Agricultural
 MF = Multi family residential HC = Health Care
 MH = Mobile home GI = Government/Institutional
 C = Commercial land PT = Public transportation
 S = Service U = Utilities

Sources: Levy, Marion, Sumter, Citrus and Hernando County 1986
 Tax Rolls, 1987.
 Withlacoochee Regional Planning Council, 1987.

APPENDIX D
ANNUALIZED LOSSES BY LOSS ZONE FOR
EACH COUNTY IN THE WITHLACOOCHEE REGION

ANNUALIZED VALUES OF LOSS FOR A CATEGORY ONE HURRICANE

Loss Zone	ANNUALIZED LOSS (\$)				
	SF	MF	MH	C	S
<u>Citrus County</u>					
C1	29,149,315	2,352,876	7,571,776	2,699,411	2,610,157
C2	409,849	9,097	147,306	37,846	22,728
C3	445,235	5,459	124,770	14,987	9,260
C4	245,503	1,315	61,293	2,683	4,822
C5	1,709,120	126,352	290,858	52,817	17,457
C6	1,031,054	154,514	344,402	57,000	48,994
C7	2,950,147	98,491	230,757	199,184	97,774
C8	126,530	0	39,158	612	2,418
TOTAL	36,066,753	2,748,104	8,810,320	3,064,540	2,813,610
<u>Hernando County</u>					
H1	12,775,791	53,370	101,196	102,607	29,239
H2	2,837	0	4,475	13,499	0
H3	1,651,802	83,200	46,514	202,439	58,847
H4	6,943,690	111,369	825,955	119,054	97,368
H5	1,249,865	85,607	94,832	271,416	128,272
H6	473,110	813	75,815	39,376	6,736
H7	573,515	920	35,760	8,723	25,132
H8	298	0	128	0	0
TOTAL	23,670,908	335,279	1,184,675	757,114	345,594

ANNUALIZED VALUES OF LOSS FOR A CATEGORY ONE HURRICANE

Loss Zone	SF	MF	ANNUALIZED LOSS (\$)		S
			MH	C	
<u>Levy County</u>					
L1	4,343,112	489,958	438,785	125,976	199,077
L2	298,942	0	23,500	11,843	0
L3	469,515	2,658	34,823	51,786	11,486
L4	176,988		24,252	1,001	3,301
L5	541,516	9,493	57,895	25,866	22,772
L6	189,982	6,811	15,228	13,717	8,630
L7	295,607	5,043	49,717	16,318	34,263
TOTAL	6,315,662	513,963	644,200	246,507	279,529
<u>Marion County</u>					
M1	949,919	28,139	30,940	25,614	48,230
M2	171,519	0	34,420	261	1,074
M3	395,194	37,142	48,480	1,394	2,248
M4	2,387,150	255,602	118,325	234,341	275,694
M5	9,407,890	1,083,436	322,575	1,049,048	852,725
M6	841,817	5,330	198,978	19,023	25,465
M7	64,472	1,072	15,446	1,283	6,856
TOTAL	14,217,961	1,410,721	769,164	1,330,964	1,212,292
<u>Sumter County</u>					
S1	22,874	0	14,298	287	520
S2	149,862	1,252	42,130	1,211	6,262
S3	1,345,903	62,327	152,085	10,976	155,460
TOTAL	1,518,639	63,579	208,513	12,474	162,242

ANNUALIZED VALUES OF LOSS FOR A CATEGORY
ONE HURRICANE CONTINUED

Loss Zone	M	A	GI	ANNUALIZED LOSS (\$) HC	PT	1 U
<u>Citrus County</u>						
C1	204,133	1,037,061	1,804,362	70,563	10,000	6,982,330
C2	47,384	80,176	10,237	5,008	6	2,561
C3	29,372	22,214	11,114	0	117	3,177
C4	201	7,005	11,706	0	303	0
C5	25,098	276,814	161,556	2,323	94	11,681
C6	26,706	222,010	426,332	0	185	1,976
C7	18,657	431,312	187,490	32,621	3,924	8,235
C8	1,370	65,586	515	0	3	1,361
TOTAL	352,921	2,142,178	2,613,312	110,515	14,632	7,011,321
<u>Hernando County</u>						
H1	7,364	147,516	87,336	0	0	32,240
H2	0	36,886	14,222	0	0	1,280
H3	0	47,783	15,213	0	0	1,237
H4	10,795	229,402	140,218	87,384	0	0
H5	49,834	617,785	25,755	13,403	104	16,356
H6	0	567,525	20,160	13	8	941
H7	13,575	139,484	76,237	0	0	2
H8	0	18,104	111,175	0	0	0
TOTAL	81,568	1,804,485	490,316	100,800	112	52,056

ANNUALIZED VALUES OF LOSS FOR A CATEGORY
ONE HURRICANE CONTINUED

Loss Zone	M	A	GI	ANNUALIZED LOSS (\$) HC	PT	1 U
<u>Levy County</u>						
L1	5,691	397,398	349,488	0	662	6,002
L2	0	202,041	18,877	0	0	3,568
L3	8,243	207,311	5,372	0	0	11,794
L4	768	464,273	14,683	807	0	0
L5	4,139	328,286	49,161	0	20	765
L6	5,521	79,183	26,223	3,827	0	269
L7	9,892	205,767	70,748	0	25	10,017
TOTAL	34,254	1,884,259	534,552	4,634	707	32,415
<u>Marion County</u>						
M1	2,709	236,470	74,453	0	16	3,404
M2	236	794,116	64,996	0	0	1,015
M3	579	1,301,973	32,615	0	1,177	2,958
M4	19,136	1,323,378	208,190	0	252,257	11,612
M5	563,926	2,289,325	829,992	195,045	46,878	43,981
M6	5,512	567,566	1,475,085	0	2,998	4,445
M7	0	63,129	428,297	0	22	0
TOTAL	592,098	6,575,957	3,113,628	195,045	303,348	67,415
<u>Sumter County</u>						
S1	0	49,574	127	0	0	50
S2	1,385	354,239	18,536	0	826	0
S3	69,196	1,371,749	131,715	5,034	534	10,976
TOTAL	70,581	1,775,562	150,378	5,034	1,360	11,026

ANNUALIZED VALUES OF LOSS FOR A CATEGORY TWO HURRICANE

Loss Zone	SF	MF	ANNUALIZED LOSS (\$)		
			MH	C	S
<u>Citrus County</u>					
C1	19,965,812	1,624,209	4,692,292	1,739,272	1,681,915
C2	357,171	6,385	233,006	35,299	21,199
C3	279,064	3,484	128,404	9,665	5,972
C4	153,086	835	63,141	1,721	3,093
C5	2,295,503	79,344	300,291	33,503	11,073
C6	629,746	87,383	344,402	37,058	30,371
C7	1,771,915	58,848	214,942	120,035	58,922
C8	76,201	0	37,090	369	897
TOTAL	25,528,498	1,860,488	6,013,568	1,976,922	1,813,442
<u>Hernando County</u>					
H1	6,928,312	33,358	54,305	65,862	19,728
H2	2,493	0	6,947	12,603	0
H3	1,438,965	70,342	72,837	188,943	54,924
H4	4,337,319	70,966	854,863	76,659	62,695
H5	757,661	52,429	93,243	167,759	79,283
H6	283,866	485	81,287	2,946	4,056
H7	345,391	550	33,871	5,262	15,161
H8	179	0	121	0	0
TOTAL	14,094,186	228,130	1,197,474	520,034	235,847

ANNUALIZED VALUES OF LOSS FOR A CATEGORY TWO HURRICANE

Loss Zone	SF	MF	ANNUALIZED LOSS (\$)		
			MH	C	S
<u>Levy County</u>					
L1	2,912,695	285,031	251,955	88,059	129,616
L2	250,146	0	30,259	11,450	0
L3	443,797	2,489	346,070	44,678	9,909
L4	109,392	0	25,030	634	2,091
L5	329,477	5,811	57,553	15,984	1,407
L6	114,048	4,069	14,452	8,266	5,200
L7	177,920	3,021	46,754	9,861	20,704
TOTAL	4,337,475	300,421	772,073	178,932	168,927
<u>Marion County</u>					
M1	575,529	17,226	30,757	32,512	29,804
M2	103,071	0	32,743	157	648
M3	23,826	22,227	45,864	842	1,357
M4	1,441,744	152,953	111,392	141,526	166,501
M5	5,534,053	650,062	288,619	635,600	516,651
M6	51,635	3,275	165,152	11,828	15,834
M7	40,167	670	12,496	814	4,350
TOTAL	7,770,025	846,413	687,023	823,279	735,145
<u>Sumter County</u>					
S1	13,760	0	13,498	173	313
S2	90,301	750	39,739	734	3,798
S3	81,202	37,362	142,886	6,642	94,071
TOTAL	185,263	38,112	196,123	7,549	98,182

ANNUALIZED VALUES OF LOSS FOR A CATEGORY
TWO HURRICANE CONTINUED

Loss Zone	ANNUALIZED LOSS (\$)					1
M	A	GI	HC	PT	U	
<u>Citrus County</u>						
C1	131,858	663,946	119,880	61,692	6,435	4,285,332
C2	34,854	60,710	7,752	5,783	4	1,939
C3	18,943	14,326	7,168	0	75	2,049
C4	128	44,936	7,509	0	194	0
C5	15,920	175,591	102,479	14,738	60	7,410
C6	16,555	137,623	264,282	0	115	12,255
C7	11,243	259,922	112,987	19,658	2,364	4,963
C8	826	39,566	311	0	1	821
TOTAL	230,327	1,396,620	622,368	101,871	9,248	4,314,769
<u>Hernando County</u>						
H1	4,590	104,187	57,516	0	0	19,353
H2	0	28,010	10,818	0	0	973
H3	0	36,292	11,554	0	0	940
H4	6,891	147,712	90,287	56,266	0	0
H5	30,802	381,835	158,552	8,061	65	10,109
H6	0	341,703	121,386	7	5	566
H7	8,189	84,145	45,991	0	0	1
H8	0	10,923	67,077	0	0	0
TOTAL	50,472	1,134,807	563,181	64,334	70	31,942

ANNUALIZED VALUES OF LOSS FOR A CATEGORY
TWO HURRICANE CONTINUED

Loss Zone	M	A	GI	HC	PT	U
<u>Levy County</u>						
L1	3,539	249,378	219,233	0	415	3,766
L2	0	139,990	13,080	0	0	2,472
L3	6,549	161,197	4,177	0	0	1,971
L4	487	294,193	9,304	511	0	0
L5	2,558	202,864	31,231	0	12	473
L6	3,327	47,718	15,802	2,306	0	162
L7	5,977	12,341	42,751	0	15	6,053
TOTAL	22,437	1,107,681	335,578	2,817	442	14,897
<u>Marion County</u>						
M1	1,674	146,126	46,008	0	10	2,103
M2	142	478,991	39,204	0	0	612
M3	349	786,164	19,693	0	710	1,786
M4	115,569	799,231	125,733	0	152,346	7,012
M5	341,673	1,387,062	502,877	118,174	28,402	26,647
M6	3,427	352,910	917,200	0	1,864	2,763
M7	0	40,054	227,440	0	14	0
TOTAL	462,834	3,990,538	1,878,155	118,174	183,346	40,923
<u>Sumter County</u>						
S1	0	29,928	77	0	0	30
S2	840	21,486	11,243	0	501	0
S3	41,871	830,064	7,970	3,051	323	6,642
TOTAL	42,711	881,838	19,290	3,051	824	6,672

ANNUALIZED VALUES OF LOSS FOR A CATEGORY THREE HURRICANE

Loss Zone	SF	MF	ANNUALIZED LOSS (\$)		
			MH	C	S
<u>Citrus County</u>					
C1	10,887,512	904,823	2,293,124	818,680	791,278
C2	504,433	10,211	53,177	53,177	31,936
C3	190,317	2,459	7,304	7,304	4,513
C4	8,808	495	1,036	1,306	1,862
C5	1,294,809	46,170	19,803	19,803	6,545
C6	344,689	53,924	20,402	20,402	17,536
C7	923,033	31,810	65,901	65,901	32,349
C8	38,047	0	193	193	764
TOTAL	14,191,648	1,049,892	2,460,940	986,766	886,783
<u>Hernando County</u>					
H1	3,053,804	21,248	20,241	34,127	10,050
H2	3,838	0	14,085	19,709	0
H3	1,280,736	60,550	94,725	176,607	51,338
H4	2,497,955	42,097	968,865	46,188	37,778
H5	418,078	29,874	105,523	97,106	45,892
H6	150,157	266	80,910	1,641	2,260
H7	172,457	284	36,541	275	7,945
H8	88	0	125	0	0
TOTAL	7,577,113	154,319	1,321,015	375,653	155,263

ANNUALIZED VALUES OF LOSS FOR A CATEGORY THREE HURRICANE

Loss Zone	ANNUALIZED LOSS (\$)				
	SF	MF	MH	C	S
<u>Levy County</u>					
L1	1,170,451	175,028	87,505	55,456	92,735
L2	136,448	0	12,545	5,932	0
L3	300,268	1,718	254,474	28,060	6,223
L4	61,917	0	30,561	375	1,237
L5	179,874	3,272	64,962	9,144	8,051
L6	59,668	2,217	10,685	4,576	2,878
L7	63,329	1,591	50,486	5,273	11,072
TOTAL	1,971,955	183,826	511,218	108,816	122,196
<u>Marion County</u>					
M1	313,680	9,701	34,717	18,601	17,051
M2	53,372	0	35,979	86	353
M3	118,717	11,462	48,452	440	710
M4	711,413	78,147	115,098	73,386	86,336
M5	2,764,297	326,112	286,959	323,619	263,056
M6	245,088	1,594	156,180	5,844	7,823
M7	18,659	314	11,271	387	2,069
TOTAL	4,225,226	427,330	688,656	422,363	377,398
<u>Sumter County</u>					
S1	7,038	0	14,701	93	169
S2	45,041	395	41,768	393	2,032
S3	399,660	19,028	129,643	23,362	48,623
TOTAL	451,739	19,423	186,112	23,848	50,824

ANNUALIZED VALUES OF LOSS FOR A CATEGORY
THREE HURRICANE CONTINUED

Loss Zone	M	A	GI	ANNUALIZED LOSS (\$) HC	PT	1 U
<u>Citrus County</u>						
C1	66,347	329,533	572,690	22,607	3,046	2,070,918
C2	35,168	65,196	8,325	4,073	5	2,082
C3	12,344	95,416	4,773	0	50	1,364
C4	77	27,059	4,522	0	117	0
C5	9,410	103,792	60,575	43,895	35	4,380
C6	9,559	79,465	152,600	0	66	707
C7	6,173	142,701	62,031	10,792	1,298	2,724
C8	433	20,736	162	0	1	430
TOTAL	139,511	863,898	865,678	81,367	4,618	2,082,605
<u>Hernando County</u>						
H1	2,491	54,466	29,057	0	0	9,326
H2	0	29,700	29,660	0	0	1,032
H3	0	27,579	57,543	0	0	714
H4	4,152	89,000	88,881	33,856	0	0
H5	17,829	387,058	220,726	4,660	0	5,852
H6	0	322,487	190,142	4	37	315
H7	4,292	73,982	44,040	0	2	1
H8	0	9,291	5,665	0	0	0
TOTAL	28,764	993,563	665,714	38,520	39	17,240

ANNUALIZED VALUES OF LOSS FOR A CATEGORY
THREE HURRICANE CONTINUED

Loss Zone	M	A	GI	ANNUALIZED LOSS (\$) HC	PT	1 U
<u>Levy County</u>						
L1	3,102	121,017	103,730	0	0	1,803
L2	0	70,210	6,560	0	0	1,240
L3	3,805	93,656	2,427	0	0	5,328
L4	288	17,401	5,053	302	0	0
L5	1,463	116,062	17,868	0	0	2,707
L6	1,841	26,415	8,748	1,276	0	89
L7	3,196	66,496	22,863	0	0	3,237
TOTAL	13,695	511,257	167,249	1,578	0	14,404
<u>Marion County</u>						
M1	957	83,601	26,322	0	5	1,203
M2	77	261,208	21,379	0	0	333
M3	182	411,411	10,306	0	372	934
M4	59,926	414,429	65,197	0	78,996	3,636
M5	173,965	706,231	256,043	60,169	14,461	13,567
M6	1,693	176,170	453,192	0	921	1,365
M7	0	19,052	129,258	0	6	0
TOTAL	236,800	2,072,102	961,697	60,169	94,761	21,038
<u>Sumter County</u>						
S1	0	16,118	41	0	0	16
S2	449	11,488	6,015	0	7,844	0
S3	21,642	429,045	41,197	1,577	5,269	3,433
TOTAL	22,091	456,651	47,253	1,577	13,113	3,449

ANNUALIZED VALUES OF LOSS FOR A CATEGORY FOUR HURRICANE

Loss Zone	ANNUALIZED LOSS (\$)				
	SF	MF	MH	C	S
<u>Citrus County</u>					
C1	1,078,831	100,956	189,580	101,398	98,067
C2	80,613	1,638	76,607	7,578	4,551
C3	43,268	516	44,233	1,677	1,036
C4	12,589	72	16,877	154	276
C5	193,680	7,135	87,192	3,903	1,022
C6	48,218	7,677	89,574	2,935	2,522
C7	125,487	4,383	51,377	9,180	4,506
C8	51,419	0	8,591	26	106
TOTAL	1,634,105	122,377	564,031	126,851	112,086
<u>Hernando County</u>					
H1	253,118	2,133	1,673	4,194	1,232
H2	674	0	2,640	2,966	0
H3	226,711	10,804	19,107	30,571	8,886
H4	357,043	6,209	230,930	6,878	5,625
H5	58,382	4,281	24,422	14,059	6,645
H6	20,439	36	18,069	229	316
H7	23,306	38	7,845	382	1,102
H8	11	0	26	0	0
TOTAL	939,684	23,501	304,712	59,279	23,806

ANNUALIZED VALUES OF LOSS FOR A CATEGORY FOUR HURRICANE

Loss Zone	ANNUALIZED LOSS (\$)				
	SF	MF	MH	C	S
<u>Levy County</u>					
L1	96,765	21,616	7,234	5,181	8,829
L2	11,803	0	1,037	845	0
L3	37,708	219	25,944	2,996	664
L4	8,756	0	6,660	55	152
L5	24,891	464	14,853	1,310	1,153
L6	8,140	307	3,585	640	402
L7	12,272	218	11,123	731	1,491
TOTAL	200,335	22,824	70,436	11,758	12,691
<u>Marion County</u>					
M1	43,480	1,375	7,937	2,665	2,443
M2	7,241	0	7,957	11	49
M3	15,962	1,561	10,565	60	97
M4	93,198	10,403	24,419	9,884	11,629
M5	346,772	41,564	60,975	41,726	33,917
M6	28,573	188	31,365	698	935
M7	2,020	34	2,117	43	230
TOTAL	537,246	55,125	145,335	55,087	49,300
<u>Sumter County</u>					
S1	952	0	3,227	12	23
S2	6,075	52	9,179	53	220
S3	51,977	2,511	30,814	3,125	6,505
TOTAL	59,004	2,563	43,220	3,190	6,748

ANNUALIZED VALUES OF LOSS FOR A CATEGORY
FOUR HURRICANE CONTINUED

Loss Zone	ANNUALIZED LOSS (\$)					1 U
M	A	GI	HC	PT		
<u>Citrus County</u>						
C1	8,054	39,725	66,834	3,278	388	238,126
C2	4,876	8,632	1,102	539	1	275
C3	2,189	1,745	873	0	9	249
C4	11	4,022	672	0	17	0
C5	1,469	16,212	9,462	1,360	5	684
C6	1,375	11,431	21,953	0	10	101
C7	859	19,879	8,641	1,503	180	379
C8	60	2,875	22	0	0	74
TOTAL	18,893	104,521	109,559	6,680	610	239,888
<u>Hernando County</u>						
H1	370	6,202	3,291	0	0	1,044
H2	0	4,211	1,626	0	0	146
H3	0	4,449	1,416	0	0	115
H4	618	13,253	8,101	5,048	0	0
H5	2,851	31,999	13,287	690	5	847
H6	0	26,661	9,471	1	0	44
H7	595	6,116	3,343	0	0	0
H8	0	768	2,479	0	0	0
TOTAL	4,434	93,659	43,014	5,739	5	2,196

ANNUALIZED VALUES OF LOSS FOR A CATEGORY
FOUR HURRICANE CONTINUED

Loss Zone	M	A	GI	ANNUALIZED LOSS (\$)		1 U
				HC	PT	
<u>Levy County</u>						
L1	367	13,503	11,504	0	22	200
L2	0	7,962	743	0	0	140
L3	465	11,461	297	0	0	652
L4	42	25,572	808	44	0	0
L5	209	16,628	2,560	0	1	39
L6	257	3,697	1,224	180	0	12
L7	443	9,225	3,172	0	1	449
TOTAL	1,783	88,048	20,308	224	24	1,492
<u>Marion County</u>						
M1	137	11,977	3,771	0	1	172
M2	10	36,373	2,977	0	0	46
M3	25	56,727	1,420	0	51	128
M4	8,072	55,822	8,781	0	10,640	489
M5	22,430	91,059	33,013	7,758	1,864	1,749
M6	202	20,840	54,164	0	110	163
M7	0	2,125	14,417	0	1	0
TOTAL	30,876	274,923	118,543	7,758	12,667	2,747
<u>Sumter County</u>						
S1	0	2,233	5	0	0	2
S2	60	15,534	812	0	36	0
S3	2,895	57,401	5,511	211	22	459
TOTAL	2,955	75,168	6,328	211	58	461

ANNUALIZED VALUES OF LOSS FOR A CATEGORY FIVE HURRICANE

Loss Zone	ANNUALIZED LOSS (\$)				
	SF	MF	MH	C	S
<u>Citrus County</u>					
C1	145,282	14,980	25,530	15,202	14,705
C2	13,170	318	13,308	1,450	1,198
C3	6,444	141	11,709	434	268
C4	7,244	22	5,954	60	108
C5	61,921	2,542	30,396	1,126	372
C6	16,275	2,888	38,711	1,125	967
C7	43,421	1,695	29,485	1,610	1,775
C8	1,753	0	5,331	10	40
TOTAL	295,510	22,589	160,424	21,017	19,433
<u>Hernando County</u>					
H1	34,806	287	225	589	188
H2	107	0	386	576	0
H3	47,034	2,652	4,087	7,123	2,070
H4	120,474	2,366	79,842	2,690	2,200
H5	19,794	1,611	10,242	3,675	990
H6	7,050	14	9,277	90	124
H7	7,945	14	4,868	147	425
H8	3	0	17	0	0
TOTAL	237,213	6,944	108,944	14,890	5,997

ANNUALIZED VALUES OF LOSS FOR A CATEGORY FIVE HURRICANE

Loss Zone	SF	MF	ANNUALIZED LOSS (\$)		S
			MH	C	
<u>Levy County</u>					
L1	13,031	2,911	974	697	1,189
L2	1,589	0	139	124	0
L3	5,352	35	3,493	512	113
L4	2,817	0	2,507	20	66
L5	1,431	167	6,623	480	422
L6	2,691	112	1,875	239	150
L7	4,048	80	6,365	275	578
TOTAL	30,959	3,305	21,976	2,347	2,518
<u>Marion County</u>					
M1	14,145	495	3,539	977	895
M2	2,397	0	4,321	4	18
M3	5,127	552	6,390	21	35
M4	28,879	3,509	15,008	3,372	3,967
M5	100,257	12,742	36,516	12,944	10,521
M6	8,264	57	18,540	215	288
M7	584	10	1,200	13	70
TOTAL	159,653	17,365	85,514	17,546	15,794
<u>Sumter County</u>					
S1	331	0	1,818	5	9
S2	2,061	19	2,776	20	105
S3	16,844	888	20,532	1,116	2,324
TOTAL	19,236	907	25,126	1,141	2,438

ANNUALIZED VALUES OF LOSS FOR A CATEGORY
FIVE HURRICANE CONTINUED

Loss Zone	M	A	GI	ANNUALIZED LOSS (\$) HC	PT	1 U
<u>Citrus County</u>						
C1	1,684	8,382	14,554	579	82	49,553
C2	1,284	2,273	290	211	0	72
C3	729	561	280	0	3	80
C4	4	1,569	262	0	6	0
C5	535	5,905	3,476	495	2	249
C6	527	4,384	8,419	0	3	39
C7	338	7,834	738	592	71	149
C8	23	1,110	8	0	0	23
TOTAL	5,124	32,018	28,027	1,877	167	50,165
<u>Hernando County</u>						
H1	60	1,450	751	0	0	228
H2	0	1,117	431	0	0	38
H3	0	1,212	386	0	0	31
H4	241	5,183	3,168	1,974	0	0
H5	1,589	12,279	5,098	259	2	325
H6	0	10,466	3,718	0	0	17
H7	229	2,362	1,291	0	0	0
H8	0	281	1,729	0	0	0
TOTAL	2,119	34,350	16,572	2,233	2	639

ANNUALIZED VALUES OF LOSS FOR A CATEGORY
FIVE HURRICANE CONTINUED

Loss Zone	M	A	GI	ANNUALIZED LOSS (\$)		1 U
				HC	PT	
<u>Levy County</u>						
L1	59	2,678	2,244	0	4	39
L2	0	1,688	157	0	0	29
L3	105	2,599	67	0	0	147
L4	15	9,300	294	16	0	0
L5	76	6,096	271	0	0	14
L6	96	1,382	457	66	0	4
L7	167	3,476	568	0	0	16
TOTAL	518	27,219	4,058	82	4	249
<u>Marion County</u>						
M1	50	4,391	1,382	0	0	63
M2	4	13,647	1,116	0	0	17
M3	9	20,302	508	0	18	46
M4	2,753	19,045	2,996	0	3,630	167
M5	6,958	28,448	10,241	2,406	578	542
M6	62	6,421	16,690	0	33	50
M7	0	652	4,425	0	0	0
TOTAL	9,836	92,906	37,358	2,406	4,259	885
<u>Sumter County</u>						
S1	0	884	2	0	0	1
S2	23	5,957	311	0	13	0
S3	1,034	20,508	1,904	72	7	158
TOTAL	1,057	27,349	2,217	72	20	159

1 - V = Vacant land M = Manufacturing
 SF = Single family residential A = Agricultural
 MF = Multi family residential HC = Health Care
 MH = Mobile home GI = Government/Institutional
 C = Commercial land PT = Public transportation
 S = Service U = Utilities

Sources: Levy, Marion, Sumter, Citrus and Hernando County 1986
 Tax Rolls, 1987.
 Withlacoochee Regional Planning Council, 1987.

APPENDIX E
VALUES OF AGRICULTURAL PRODUCTS BY
LOSS ZONE FOR EACH COUNTY IN THE
WITHLACOOCHEE REGION

VALUE OF AGRICULTURAL PRODUCTS
BY LOSS ZONE - CITRUS COUNTY

Agricultural Practice	Loss Zone	% of Acreage	Annual Value (X \$1,000)
Beef Cattle	C1	25	\$ 238
	C5	25	238
	C6	25	238
	C7	25	238
Poultry	C5	50	1,245
	C6	50	1,245
Watermelon	C5	40	362
	C6	40	362
	C7	20	181
Ornamental Plants	C1	10	190
	C6	40	760
	C7	50	950
Citrus	C4	10	48
	C5	10	48
	C6	10	48
	C7	70	335
Deciduous Fruits	C4	40	48
	C6	20	24
	C7	40	<u>48</u>
Total Value			\$6,846

Sources: Withlacoochee Regional Planning Council, 1987.
Citrus County Extension Service, 1987.

VALUE OF AGRICULTURAL PRODUCTS
BY LOSS ZONE - HERNANDO COUNTY

Agricultural Practice	Loss Zone	% of Acreage	Annual Value (x \$1,000)
Beef Cattle	H4	10	1,059
	H5	50	5,293
	H6	23	2,435
	H7	15	1,588
	H8	2	212
Dairy Cows	H5	28	916
	H6	53	1,734
	H7	19	621
Poultry	H4	15	300
	H5	35	701
	H6	30	600
	H7	20	400
Watermelon	H5	70	158
	H6	30	68
Hay	H4	10	20
	H5	45	90
	H6	40	80
	H7	5	10
Ornamental Plants	H1	0.5	1
	H3	0.5	1
	H4	5	11
	H5	70	158
	H6	10	23
	H7	14	32
Citrus	H5	5	29
	H6	95	<u>547</u>
Total Value			17,087

Sources: Withlacoochee Regional Planning Council, 1987.
Hernando County Extension Service, 1987.

VALUE OF AGRICULTURAL PRODUCTS
BY LOSS ZONE - LEVY COUNTY

Agricultural Practice	Loss Zone	% of Acreage	Annual Value (x \$1,000)
Beef Cattle	L1	2	84
	L2	1	42
	L3	2	84
	L4	11	463
	L5	29	1,221
	L6	14	590
	L7	41	1,727
Dairy Cows	L5	40	1,674
	L7	60	2,511
Poultry	L5	50	1,000
	L7	50	1,000
Watermelon	L4	8	287
	L5	25	895
	L6	27	967
	L7	40	1,432
Corn	L4	7	40
	L5	11	62
	L6	9	51
	L7	73	413
Soybeans	L5	14	56
	L6	10	40
	L7	76	304
Peanuts	L5	41	1,079
	L6	19	500
	L7	40	1,053
Tobacco	L7	100	<u>205</u>
Total Value			17,780

Ornamental plants are grown in Levy County, although annual yield information was not available.

Sources: Withlacoochee Regional Planning Council, 1987.
Levy County Extension Service, 1987.

VALUE OF AGRICULTURAL PRODUCTS BY LOSS ZONE - MARION COUNTY

Agricultural Practice	Loss Zone	% of Acreage	Annual Value (X \$1,000)
Beef Cattle	M1	20	\$ 134
	M2	15	1,451
	M3	15	1,451
	M4	15	1,451
	M5	25	2,418
	M6	10	967
Dairy Cows	M4	10	761
	M5	80	6,093
	M6	10	761
Poultry	M1	100	1,021
Watermelon	M2	10	249
	M3	25	625
	M4	25	625
	M5	25	625
	M6	15	375
Tomatoes	M5	100	632
Ornamental Plants	M3	25	1,800
	M5	60	750
	M6	15	450
Citrus	M6	100	334
Sorgum	M4	40	720
	M5	60	1,080
Corn	M5	100	357
Soybeans	M4	100	24
Peanuts (includes green peanuts)	M1	25	807
	M2	25	807
	M4	10	323
	M5	40	1,292
Tobacco	M2	100	188
Horse Farms	M3	40	80,000
	M4	40	80,000
	M5	20	<u>40,000</u>
Total Value			228,571

Sources: Withlacoochee Regional Planning Council, 1987.
Marion County Extension Service, 1987.

VALUE OF AGRICULTURAL PRODUCTS
BY LOSS ZONE - SUMTER COUNTY

Agricultural Practice	Loss Zone	% of Acreage	Annual Value (X \$1,000)
Beef Cattle	S2	3	\$ 316
	S3	97	10,222
Dairy Cows	S3	100	2,311
Poultry	S2	33	3,840
	S3	66	7,682
Vegetable Crops	S3	100	5,755
Watermelon	S2	5	107
	S3	95	2,041
Hay	S2	3	157
	S3	97	5,093
Ornamental Plants	S2	3	60
	S3	97	2,190
Citrus	S2	32	37
	S3	68	77
Alligator Farming	S2	20	700
	S3	80	<u>2,800</u>
Total Value			\$43,388

Sources: Withlacoochee Regional Planning Council, 1987.
Sumter County Extension Service, 1987.

VALUE OF TIMBER, BY LOSS ZONE,
IN THE WITHLACOOCHEE REGION

County	Loss Zone	% of Acreage	Annual Value (X \$1,000)
Citrus	C1	20	\$ 36.2
	C5	20	36.2
	C6	50	90.5
	C7	10	18.1
Hernando	H1	23	3.0
	H2	7	0.9
	H3	6	0.8
	H4	12	1.6
	H5	8	1.0
	H6	16	2.1
	H7	15	2.0
	H8	13	1.7
Levy	L1	21	1,003.3
	L2	5	238.9
	L3	10	477.8
	L4	44	2,102.3
	L5	14	668.9
	L7	6	286.7
Marion	M1	5	181.7
	M2	5	181.7
	M3	10	363.3
	M4	2	72.7
	M5	25	908.3
	M6	38	1,380.5
	M7	15	545.0
Sumter	S1	2	4.8
	S2	33	78.5
	S3	65	<u>154.7</u>
Total Value			\$8,843.2

Sources: County Foresters, 1987.
Withlacoochee Regional Planning Council, 1987.

APPENDIX F
HAZARDOUS MATERIALS INVENTORY
FOR THE WITHLACOCHEE REGION

HAZARDOUS MATERIALS INVENTORY WITHIN
THE WITHLACOCHEE REGION

Name	Location	Loss Zone
Bushnell Electronics Manufacturing Co.	Bushnell	S3
Commercial Carrier Corp.	Sumterville	S3
Ferro Corp.	Wildwood	S3
Armco, Inc.	Wildwood	S3
Posey and Seaver, Inc.	Tarrytown	S3
Seaboard System Railroad, Inc.	Center Hill	S3
Speedling, Inc.	Bushnell	S3
Strickland Motor Sales	Wildwood	S3
Sumter Electric Cooperative, Inc.	Sumterville	S3
Sumter Motor Co.	Wildwood	S3
Wildwood Central Repair Shop	Wildwood	S3
Wildwood Quality Cleaners	Wildwood	S3
Wildwood Truckers Paradise	Wildwood	S3

Source: Environmental Protection Agency, RCRA Notifiers list,
1987.

APPENDIX G
EMPLOYMENT AND INCOME STATISTICS FOR
THE WITHLACOOCHEE REGION

MEDICAL FACILITIES

TABLE 46

HOSPITALS IN THE WITHLACOCHEE REGION

Name of Hospital	Location/ Loss Zone	Status	# of Beds	Occupancy %	Replacement Value 1 (X \$1,000)
<u>Citrus County</u>					
-Citrus Memorial Hospital	Inverness, C7	For Profit	171	77.8	\$ 22,230
-Seven Rivers Community Hospital	Crystal River, C1	Private For Profit	90	66.8	11,700
<u>Hernando County</u>					
-Lykes Memorial Hospital	Brooksville, H5	Private Non-Profit	166	53.4	21,580
-Oak Hill Community Hospital	Spring Hill, H4	Private For Profit	96	56.5	12,480
<u>Levy County</u>					
-Williston Memorial Hospital	Williston, L6	Private Non-Profit	40	47.5	5,200
<u>Marion County</u>					
-Marion Community Hospital	Ocala, M5	Private For Profit	190	66.8	24,700
-Munroe Regional Medical Center	Ocala, M5	Private Non-Profit	311	60.5	40,430
					\$138,320

1 - Replacement value calculated using estimated price per bed a \$130,000 provided by Lykes Memorial Hospital and Citrus Memorial Hospital, 1987.

Sources: North Central Florida Health Planning Council, 1987.
Withlacoochee Regional Planning Council, 1987.

NON-PROFIT CUSTODIAL CARE FACILITIES

TABLE 47

PRIVATE NON-PROFIT CUSTODIAL CARE
FACILITIES IN THE WITHLACOOCHEE REGION

Name	Type of Facility	Location	Loss Zone	Replacement Value \$ 2
<u>Citrus County</u>				
Marion-Citrus Mental Health Center, Inc.	Outpatients	Lecanto	C5	\$490,000
<u>Hernando County</u>				
Hernando County Community Mental Health Center, Inc.	-Outpatients/ Administration	Brooksville	H5	325,000
	-Satellite Office	Spring Hill	H4	5,000 3
<u>Levy County</u>				
Mental Health Services, Inc.	Administration	Bronson	L5	5,000 4
<u>Marion County</u>				
Marion-Citrus Mental Health Center, Inc.	-Administration	Ocala	M4	950,000
	-Crisis Center	Ocala	M4	650,000
	-Detoxification Center	Ocala	M4	260,000
	-Outpatients	Ocala	M4	40,000
	-Foster Home	Kendrick	M4	50,000
<u>Sumter County</u>				
Lake-Sumter Mental Health Center, Inc. 1	-Supervised Group Home	Sumterville	S3	35,800
	-Outpatients	Sumterville	S3	39,200
Total				\$2,850,000

1 - This facility is based in Leesburg.

2 - Values provided by facilities.

3 - Value of building contents, building is rented.

4 - Building is a mobile home.

Sources: Hernando County Community Mental Health Center, Inc., 1987.
 Lake-Sumter Mental Health Center, Inc., 1987.
 Marion-Citrus Mental Health Center, Inc., 1987.
 Mental Health Services, Inc., 1987.
 Office of Licensure and Certification, Health and
 Rehabilitative Services, 1987.

CHAPTER 7
THE EFFECTS OF HURRICANE LOSSES UPON
EMPLOYMENT AND ECONOMIC DEVELOPMENT

THE EFFECTS OF HURRICANE LOSSES UPON EMPLOYMENT AND ECONOMIC DEVELOPMENT

This section considers potential hurricane induced losses to the economic development and work force of the region by loss zone. The economic effects of employment loss and reduced payrolls are based upon the number of days of inoperation of establishments caused by the hurricane weather phenomena.

THE ECONOMY OF THE WITHLACOOCHEE REGION

The population of the Withlacoochee region doubled between 1970 and 1980 with over 13,300 people immigrating each year. From 1980 to 1985 that rate has dropped to 8,200 people annually. It is estimated that by 1995 the region will contain over half a million people. A considerable percentage of these people are expected to reside in the Ocala/Marion County Metropolitan Statistical Area. Presently Marion County contains double the populations of Citrus and Hernando counties and over six times the populations of Levy and Sumter counties. The immigration of retirees is expected to continue, sustaining a large percentage of older residents.

Historically, the Withlacoochee region has contained industries based upon local natural resources such as timber, seafood, and agriculture, the products of which were consumed locally. The labor force is predominantly semi- or unskilled, with a low percentage of college graduates. Traditionally the area employs a low percentage of women and is practically non-union. The region has a lower than national rate of unemployment and a rate close to that of the state. Sumter County, however, maintains persistently higher than national rates. It is predicted that unemployment rates will fall in the future. However, recent new jobs have been in low paying retail and service industries.

EMPLOYMENT TRENDS

The trends in employment by industry can be seen in Table 48. Agriculture is covered in Chapter 3. Government and retail trade employed over 40 percent of the population of the region in 1980. From 1980 to 1985 there was a 43 percent increase in non-agricultural employment. Employment in retail trade and services increased. The manufacturing industry maintained over 13 percent and government employment declined. By 1995 the percentage of the labor force employed in the government sector will be less than 14 percent. The professional and technical fields are expected to experience the most rapid growth.

TABLE 48

EMPLOYMENT BY INDUSTRY IN THE WITHLACOOCHEE REGION
1980 - 1995

Industry Category	1980		1985		1995	
	#	%	#	%	#	%
- Mining	662	1.1	800	0.9	1,076	0.8
- Construction	5,641	9.4	8,363	9.7	13,807	9.9
- Manufacturing	7,908	13.1	11,670	13.5	19,194	13.8
- Transportation, Communication and Utilities	2,780	4.6	4,407	5.1	7,661	5.5
- Wholesale Trade	3,051	5.1	4,197	4.9	6,489	4.7
- Retail Trade	13,945	23.1	21,347	24.7	36,151	26.0
- Finance, Ins. and Real Estate	3,029	5.0	4,597	5.3	7,733	5.6
- Services	8,673	14.4	14,935	17.3	27,459	19.8
- Government	14,635	24.3	16,172	18.7	19,246	13.9
- Total Employment	60,324	100.0	86,488	100.0	138,816	100.0

Source: "Economic Development Targeted Industry Study for the
Withlacoochee Private Industry Council Service Delivery
Area" Strategic Planning Group Inc., 1986.

The Florida Department of Labor and Employment Security (1985) predicted a greater increase in both retail and wholesale trade, estimating that 57 percent of the region's workers will be employed in those fields. A 30 percent increase in service industries is also predicted for 1995. The manufacturing industry is expected to employ a constant 13 to 14 percent of the work force unless economic development in this area is encouraged.

ECONOMIC DEVELOPMENT

Economic development in the area will depend upon the balance of industrial location incentives and disincentives. The region has large areas of vacant zoned industrial land for potential development. Construction costs are low and local contractors and unimproved sites are available. The transportation network includes north-south rail links, Interstate 75 north-south, and the Florida Turnpike. The closest airports with commercial service are Gainesville, Tampa and Orlando. Proximal deepwater ports include Tampa and Jacksonville, with the now defunct Florida Barge Canal providing potential access through Port Citrus. The low rates of taxation, low cost of living, and lack of union participation are identified (Strategic Planning Group, Inc., 1986) as important incentives to economic development.

However, the rural nature of the area, the decline of rail transportation as an industrial location factor, and the lack of basic infrastructure are disincentives to development in the region. Specifically, a closer commercial airport, well maintained local roads, wastewater treatment plants and a source of natural gas are lacking. The small manufacturing base and lack of markets are problems that have prevented economic development in the past.

ASSESSING EMPLOYMENT LOSS

The amount of wind and surge experienced before and during a tropical cyclone will directly and indirectly impact the economy of the region. Coastal areas will receive the most direct effects, with wind and surge damage to buildings and infrastructure. Employers may be directly affected by destruction of the place of employment, and also indirectly by loss of electrical, communication and water facilities. The valuation of temporary employment loss is based upon the potential damage sustained by non-residential buildings, and the resulting days of inoperation.

TABLE 49

THE TOTAL EMPLOYEE INCOME LOSS PER
BUSINESS, PER DAY OF INOPERATION

County	Type of Industry		
	Manufacturing	Commercial ¹	Service
Citrus	² \$1,185	\$497	³ W
Hernando	2,143	589	685
Levy	684	350	803
Marion	3,034	718	671
Sumter	2,231	442	468
Regional Average	1,856	519	⁴ 657

1 - Commercial category includes wholesale trade, retail trade, and finance, insurance and real estate.

2 - This figure represents the mean value of employee income for one day of inoperation of a manufacturing business in Citrus County, calculated by multiplying the mean daily income by the mean number of employees per establishment.

3 - Data withheld to prevent disclosure of individual firms

4 - Part of this total withheld.

Sources: "Employment and Payrolls of workers covered by the Florida Compensation Law...". Florida Dept. of Labor and Employment Security, 1986.
"Florida County Comparisons 1986" Florida. Dept. of Commerce.
Withlacoochee Regional Planning Council, 1987.

The inventory of structures in Chapter 1 provided the number of manufacturing, commercial and service establishments by loss zone. For each industry type a mean salary per hour (Appendix G) was multiplied by the mean number of employees, (Florida Dept. of Commerce, 1986) giving a total employee income value per business, per day (Table 49). The commercial designation includes wholesale trade, retail trade, financial, insurance and real estate businesses (Appendix G). The days of inoperation for each land use type depends upon the percent of damage sustained by wind and storm surge. The amount of damage sustained affects the length of time buildings cannot be used and so the duration of unemployment.

Vulnerability coefficients for each section affected by hurricane wind and surge, and for loss zones affected by only wind damage were the basis of calculating days of inoperation. One hundred percent loss of a structure would cause service disruption and unemployment for an estimated 365 days (see figure 5). If fifty percent destruction of the structure occurs, however, the inoperation time is only 67 days. Days of inoperation increase dramatically for over 50 percent destruction, as would be expected. A building that is 70 percent destroyed would be out of action almost as long as for 100 percent destruction. A building 70 percent destroyed would probably not be able to remain open, resulting in 100 percent employment loss for that establishment, and potentially 100 percent reconstruction. The possible low estimate of employment loss at high levels of damage, is balanced at the other end of the scale. A 5 percent damage to a building may not result in any days of lost production, for example, although one day of inoperation was assumed. At this level of damage rebuilding and repair may not affect employment.

Dollar losses in the manufacturing, service and commercial industries by storm category and loss zone are shown in Appendix H. It should be noted that dollar estimates from loss of employee income may be low for higher category storms because the figure is based on percent damage to establishments. A category 5 hurricane, for example, would be expected to have considerably higher dollar losses than a category 1, since the higher surge and stronger winds will do more damage. Also the indirect results, such as impassable roads and the lack of utilities, will further raise the value of loss by lengthening the recovery period.

Appendix H shows that not only higher category storms, but location plays an important role in the extent of loss. Coastal loss zones will experience the worst effects of the storm. Fortunately, in the Withlacoochee region the coastal loss zones are not highly developed, so that the value of loss is low in

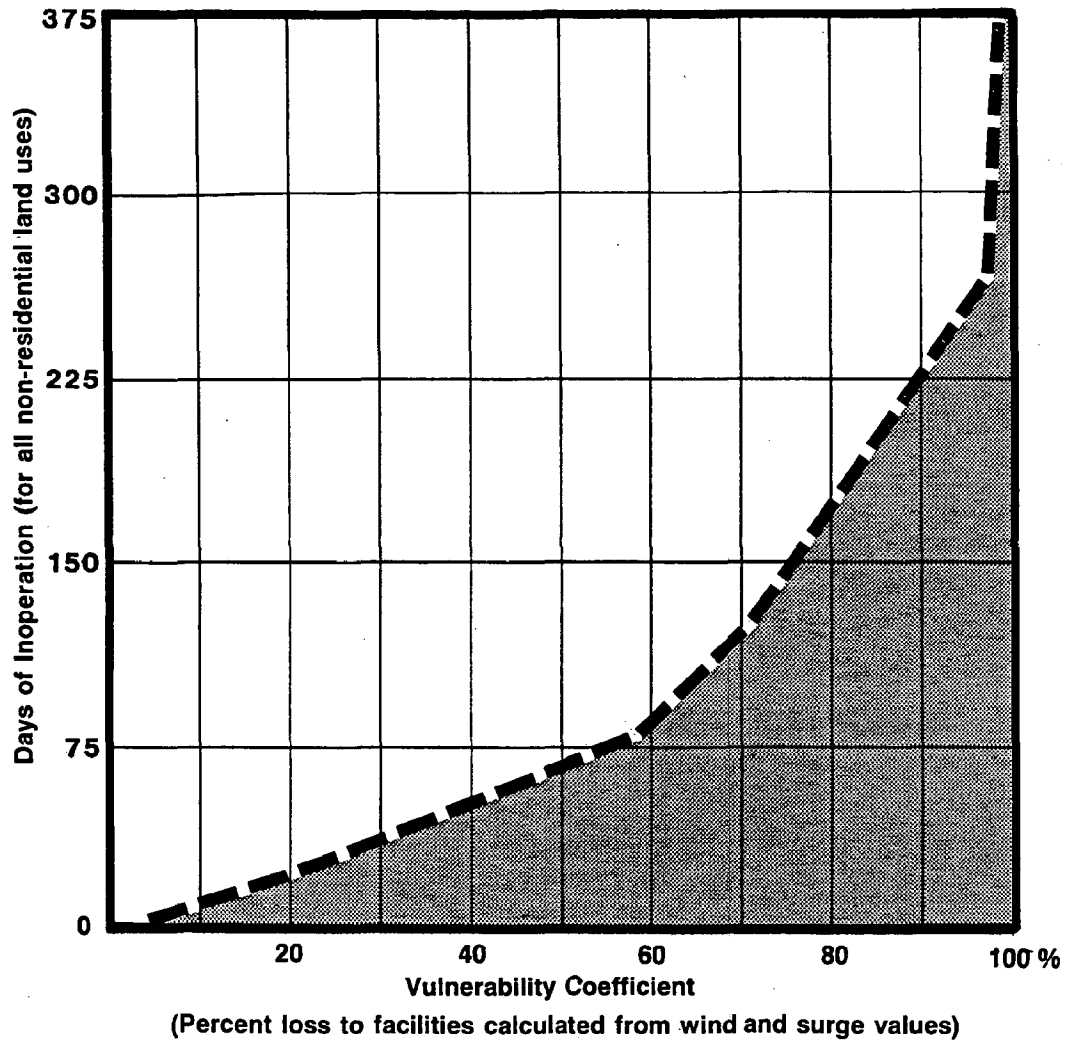
zones 1 and 2 in Levy, Citrus and Hernando counties. The swampy conditions and lack of market or support services have prevented large industrial, commercial or service centers from being developed along the region's coastline. The municipalities of Cedar Key and Crystal River are the incorporated areas most prone to hurricane losses, both being in the primary coastal loss zone. In the aftermath of a hurricane landfall most industries will suffer setbacks. Lack of productivity, layoffs, and in most cases, no market, will be immediate problems. The commercial and manufacturing industries are probably most affected. These industries may not have access to raw materials, or any method of distributing the product, as well as sustaining damage to the premises and a lack of support facilities. It has been shown that after a disaster essential survival items only are purchased. Therefore, except for those stores selling basic goods and construction items, the buying power of the general public will be considerably lowered during the post-hurricane recovery.

Seasonal employment will suffer losses. In the region the agricultural and tourism industries employ seasonal labor. Hurricane damage severely disrupts both these industries resulting in layoffs of seasonal employees. The government sector, construction and transportation industries are not expected to suffer severe losses in employment. Reconstruction and co-ordination needs may even temporarily boost these endeavors. One of the severest effects of days of unemployment is the depletion of revenues. Unemployment compensation paid out will reduce state and local monetary reserves, at a time when tax revenues are lowered.

ANNUALIZED LOSS

Annualized values are prepared for temporary employment losses in the same way as annualized losses to structures. Losses calculated for employment are converted to anticipated annual losses using the return periods (Chapter 2, Table 5). The annualized losses for lower category hurricanes are larger than for a category five hurricane because the time between events is estimated as considerably longer for higher category storms (Appendix I).

FIGURE 5
The Relationship Between Unemployment Days/Service Disruption
and Vulnerability Coefficients



SOURCES: "Tampa Bay Region Hurricane Loss and Contingency Planning Study." 1983.
Withlacoochee Regional Planning Council, 1987.

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APPENDIX A
INVENTORY OF STRUCTURES BY LOSS ZONE

INVENTORY OF STRUCTURES

Loss Zone	Number of Structures					
	V	SF	MF	MH	C	S
<u>Citrus County</u>						
C1	6,279	3,861	521	1,336	246	166
C2	2,150	701	21	944	55	23
C3	3,087	833	45	794	30	11
C4	6,724	470	2	362	2	4
C5	48,320	7,436	245	2,007	62	31
C6	13,599	2,119	406	2,942	92	62
C7	11,124	6,382	187	2,024	168	116
C8	722	387	0	433	2	5
Total	92,005	22,189	1,427	10,842	657	418
<u>Hernando County</u>						
H1	1,935	941	7	20	14	3
H2	2,371	5	0	18	5	0
H3	2,953	3,128	307	310	45	25
H4	40,266	12,052	712	4,308	83	45
H5	2,876	3,109	78	948	198	123
H6	2,489	1,208	1	666	10	3
H7	5,712	1,372	2	422	9	13
H8	21	1	0	2	0	0
Total	58,623	21,816	1,107	6,694	364	212

INVENTORY OF STRUCTURES CONTINUED

Loss Zone	Number of Structures					
	V	SF	MF	MH	C	S
<u>Levy County</u>						
L1	1,348	643	82	114	24	20
L2	475	79	0	22	2	0
L3	1,064	245	1	316	14	11
L4	3,776	441	0	259	6	6
L5	15,086	1,630	3	612	66	93
L6	1,615	618	4	174	26	30
L7	5,284	918	4	613	43	62
Total	28,648	4,574	94	2,110	181	222
<u>Marion County</u>						
M1	15,061	2,272	77	317	59	56
M2	5,704	349	0	363	2	4
M3	7,319	748	57	511	5	4
M4	24,461	6,785	665	1,378	174	193
M5	38,152	22,471	2,886	4,413	760	915
M6	17,064	3,722	14	3,811	63	65
M7	1,296	334	2	349	3	6
Total	109,057	35,681	3,701	11,142	1,066	1,243
<u>Sumter County</u>						
S1	152	108	0	239	1	1
S2	1,227	513	6	617	6	12
S3	4,255	4,913	175	2,594	208	238
Total	5,634	5,534	181	3,450	215	251

INVENTORY OF STRUCTURES CONTINUED

Loss Zone	Number of Structures					1
	M	A	GI	HC	PT	U
<u>Citrus County</u>						
C1	39	108	222	2	55	254
C2	21	77	35	2	9	19
C3	11	35	33	0	31	104
C4	1	113	38	0	35	0
C5	28	333	171	1	66	44
C6	44	243	162	0	52	29
C7	24	488	136	5	194	50
C8	3	68	136	5	194	50
Total	171	1,465	933	15	636	550
<u>Hernando County</u>						
H1	1	26	415	0	0	49
H2	0	12	13	0	0	4
H3	0	19	27	0	0	7
H4	10	229	248	3	0	0
H5	47	735	248	2	3	65
H6	0	662	104	1	2	7
H7	1	135	70	0	0	1
H8	0	36	29	0	0	0
Total	59	1,854	1,154	6	5	133

INVENTORY OF STRUCTURES CONTINUED

Loss Zone	Number of structures					
	M	A	GI	HC	PT	¹ U
<u>Levy County</u>						
L1	2	139	186	0	4	6
L2	0	108	17	0	0	2
L3	10	161	19	0	0	3
L4	4	778	96	3	0	0
L5	14	1,081	155	0	2	16
L6	12	343	67	1	0	2
L7	15	838	73	0	2	13
Total	57	3,448	613	4	8	42
<u>Marion County</u>						
M1	5	235	225	0	1	12
M2	2	496	64	0	0	7
M3	2	1,134	62	0	3	19
M4	140	1,295	526	0	18	80
M5	392	2,749	1,109	16	77	103
M6	21	979	794	0	17	82
M7	0	112	49	0	5	0
Total	562	7,000	2,829	16	121	303
<u>Sumter County</u>						
S1	0	32	13	0	0	3
S2	5	508	108	0	4	0
S3	65	2,660	592	1	11	34
Total	70	3,200	713	1	15	37

1 - V = Vacant land	M = Manufacturing
SF = Single Family	A = Agricultural
MF = Multi family residential	HC = Health Care
MH = Mobile home	GI = Government/institutional
C = Commercial land	PT = Public transportation
S = Service	U = Utilities

Sources: Levy, Marion, Sumter, Citrus and Hernando County, 1986,
Tax Roll, 1987.
Withlacoochee Regional Planning Council, 1987.

APPENDIX B
LAND USE INVENTORY BY LOSS
FOR EACH COUNTY IN THE WITHLACOOCHEE REGION

LAND USE ACREAGE INVENTORY

Loss Zone	V	SF	Acreage MF	MH	C	S
<u>Citrus County</u>						
C1	18,902	3,888	200	2,171	252	567
C2	6,989	742	6	1,242	67	72
C3	5,625	1,237	5	1,031	19	25
C4	11,622	513	1	311	1	3
C5	34,732	4,298	63	2,757	446	112
C6	24,035	5,624	122	6,700	91	124
C7	16,542	9,430	211	3,612	263	288
C8	11,282	2,706	0	3,080	1	8
Total	129,729	28,438	608	20,904	1,140	1,199
<u>Hernando County</u>						
H1	7,485	214	2	9	6	3
H2	15,149	9	0	7	4	0
H3	2,957	899	108	195	58	36
H4	40,981	4,550	273	3,006	124	570
H5	14,003	2,173	73	662	348	102
H6	11,025	1,060	1	878	57	161
H7	5,121	623	3	216	16	45
H8	195	4	0	4	0	0
Total	96,916	9,532	460	4,977	613	917

LAND USE ACREAGE INVENTORY CONTINUED

Loss Zone	V	SF	Acreage MF	MH	C	S
<u>Levy County</u>						
L1	11,168	790	82	119	25	20
L2	2,886	121	0	39	26	0
L3	3,868	373	1	440	29	30
L4	13,160	771	0	390	9	53
L5	32,033	2,744	8	1,290	65	210
L6	4,708	971	8	317	30	40
L7	10,401	1,589	6	1,004	54	405
Total	78,224	7,359	105	3,599	238	758
<u>Marion County</u>						
M1	18,002	158	32	453	58	512
M2	10,291	424	0	424	1	13
M3	24,472	1,457	32	963	15	25
M4	36,684	4,061	242	1,143	576	1,584
M5	61,626	13,118	1,227	3,545	940	2,614
M6	22,355	2,672	17	2,186	87	329
M7	4,252	306	17	209	23	83
Total	177,682	22,196	1,567	8,923	1,700	5,160
<u>Sumter County</u>						
S1	97	126	0	217	1	1
S2	4,621	1,827	42	867	15	317
S3	10,783	6,830	175	3,692	299	1,610
Total	15,501	8,783	217	4,776	315	1,927

LAND USE ACREAGE INVENTORY CONTINUED

Loss Zone	M	A	GI	Acreage HC	PT	U	1
<u>Citrus County</u>							
C1	149	21,208	25,073	10	20	24,276	
C2	79	5,781	4,241	3	2	541	
C3	248	1,486	2,867	0	19	11,305	
C4	0	4,086	2,806	0	13	0	
C5	68	18,920	13,239	15	22	753	
C6	139	15,337	33,104	0	18	184	
C7	300	36,009	1,568	8	88	8,465	
C8	2	9,488	80	0	1	1,719	
Total	985	112,315	82,977	36	206	47,243	
<u>Hernando County</u>							
H1	0	3,455	11,513	0	0	3,986	
H2	0	3,399	923	0	0	152	
H3	0	3,784	298	0	0	1,200	
H4	458	15,322	2,100	42	0	1	
H5	109	33,082	5,670	11	3	582	
H6	0	27,549	15,923	0	3	73	
H7	15	9,390	7,149	0	0	8	
H8	0	1,732	14,278	0	0	0	
Total	582	97,713	57,854	53	6	6,002	

LAND USE ACREAGE INVENTORY CONTINUED

Loss Zone	M	A	Acreage		PT	¹ U
			GI	HC		
<u>Levy County</u>						
L1	2	43,897	49,071	0	0	370
L2	0	24,273	831	0	4	39
L3	679	44,366	78	0	0	3
L4	168	207,926	4,715	90	0	0
L5	70	126,700	2,528	0	2	17
L6	38	26,613	290	8	0	11
L7	494	73,240	5,733	0	2	3
Total	1,451	547,015	63,246	98	8	443
<u>Marion County</u>						
M1	26	19,209	2,228	0	1	298
M2	0	60,550	2,585	0	0	177
M3	5	85,649	2,646	0	8	313
M4	449	63,068	10,267	0	1,147	621
M5	1,526	158,177	20,025	70	92	2,605
M6	36	54,848	160,834	0	17	292
M7	0	7,909	52,624	0	2	0
Total	2,042	449,410	249,209	70	1,267	4,306
<u>Sumter County</u>						
S1	0	7,162	121	0	0	3
S2	101	52,348	13,607	0	23	0
S3	339	187,417	49,035	23	10	40
Total	440	246,927	52,763	23	33	43

1 - V = Vacant land	M = Manufacturing
SF = Single family residential	A = Agricultural
MF = Multi family residential	HC = Health Care
MH = Mobile home	GI = Government/Institutional
C = Commercial land	PT = Public transportation
S = Service	U = Utilities

Sources: Levy, Marion, Sumter, Citrus and Hernando County 1986
Tax Rolls, 1987.
Withlacoochee Regional Planning Council, 1987.

APPENDIX C
SUMMARY OF LOSSES BY HURRICANE CATEGORY
AND LOSS ZONE FOR EACH COUNTY IN THE
WITHLACOOCHEE REGION

VALUES OF LOSS FOR A CATEGORY ONE HURRICANE

Loss Zone	SF	VALUE OF LOSS (\$)		C	S
		MF	MH		
<u>Citrus County</u>					
C1	84,533,016	6,823,341	21,958,151	7,828,292	7,569,457
C2	1,188,564	26,383	427,188	109,754	65,913
C3	1,291,183	15,833	361,835	43,463	26,856
C4	711,959	3,816	177,751	7,781	13,986
C5	4,956,448	366,422	843,489	153,170	50,626
C6	2,990,059	448,092	998,768	165,302	142,084
C7	8,555,427	285,625	669,198	577,636	283,547
C8	366,937	0	113,560	1,776	7,013
TOTAL	104,593,593	7,969,512	25,549,940	8,887,174	8,159,482

Hernando County

H1	37,049,796	154,773	293,470	297,563	84,795
H2	8,229	0	12,929	39,149	0
H3	4,790,227	241,281	134,891	587,074	170,659
H4	20,136,703	322,972	2,395,271	345,258	282,369
H5	3,624,610	248,262	275,014	787,108	371,989
H6	1,372,020	2,359	219,866	14,191	19,536
H7	1,663,195	2,668	103,704	25,298	72,885
H8	338,866	0	372	0	0
TOTAL	68,645,646	972,315	3,435,517	2,095,641	1,002,233

VALUE OF LOSS FOR A CATEGORY ONE HURRICANE CONTINUED

Loss Zone	SF	VALUE OF LOSS (\$)			C	S
		MF	MH			
<u>Levy County</u>						
L1	12,595,027	1,420,879	1,272,478	365,333	577,324	
L2	866,934	0	68,152	34,347	0	
L3	1,361,596	7,710	1,009,892	150,180	33,310	
L4	513,267	0	70,332	2,904	9,574	
L5	1,570,399	27,530	167,898	75,012	66,041	
L6	550,950	19,752	44,163	39,782	25,027	
L7	857,261	14,627	144,182	47,325	99,363	
TOTAL	18,315,434	1,490,498	2,777,097	714,883	810,639	

<u>Marion County</u>						
M1	2,743,167	81,605	89,727	152,581	139,869	
M2	497,406	0	99,818	759	3,116	
M3	1,146,065	107,713	140,592	4,045	6,520	
M4	6,922,737	741,247	343,144	679,589	799,515	
M5	27,282,883	3,141,966	935,468	3,042,242	2,472,903	
M6	2,441,271	15,459	577,038	55,169	73,849	
M7	186,971	3,109	44,795	3,723	19,885	
TOTAL	41,220,500	4,091,099	2,230,582	3,938,108	3,515,657	

<u>Sumter County</u>						
S1	66,335	0	41,466	833	1,508	
S2	434,600	3,621	122,177	3,513	18,160	
S3	3,903,121	180,750	441,048	31,833	450,834	
TOTAL	4,404,056	184,371	604,691	36,179	470,502	

VALUES OF LOSS FOR A CATEGORY ONE HURRICANE CONTINUED

Loss Zone	VALUE OF LOSS (\$)						1
	M	A	GI	HC	PT	U	
<u>Citrus County</u>							
C1	594,988	3,007,479	5,232,650	204,633	29,002	20,248,757	
C2	137,412	232,512	29,689	14,526	18	7,428	
C3	85,179	64,422	32,232	0	341	9,214	
C4	583	203,154	33,949	0	880	0	
C5	72,785	802,763	468,514	67,381	273	33,877	
C6	77,449	643,830	1,236,364	0	539	5,733	
C7	54,108	1,250,807	543,722	94,602	11,380	23,883	
C8	3,973	190,202	1,495	0	9	3,948	
TOTAL	1,026,477	6,395,169	7,578,615	381,142	42,442	20,332,840	
<u>Hernando County</u>							
H1	21,356	427,798	253,275	0	0	93,438	
H2	0	106,971	41,244	0	0	3,713	
H3	0	138,571	44,119	0	0	3,589	
H4	31,037	665,268	406,635	253,415	0	0	
H5	144,520	1,791,519	743,908	37,826	304	47,434	
H6	0	1,645,823	584,659	38	24	2,730	
H7	39,369	404,505	221,090	0	0	6	
H8	0	52,503	322,409	0	0	0	
TOTAL	236,282	5,232,958	2,617,339	291,279	328	150,910	

VALUE OF LOSS FOR A CATEGORY TWO HURRICANE CONTINUED

Loss Zone	SF	VALUE OF LOSS (\$)			C	S
		MF	MH			
<u>Levy County</u>						
L1	16,893,633	1,653,180	1,461,344	510,745	751,776	
L2	1,450,851	0	175,504	66,414	0	
L3	2,574,025	14,441	2,007,208	259,138	57,476	
L4	634,476	0	145,178	3,680	12,133	
L5	1,910,968	33,707	333,809	92,708	81,620	
L6	661,480	23,604	83,825	47,947	30,164	
L7	1,031,938	17,522	271,177	57,795	120,086	
TOTAL	25,157,371	1,742,454	4,478,045	1,038,427	1,053,255	
<u>Marion County</u>						
M1	3,338,071	99,916	178,393	188,575	172,864	
M2	597,815	0	189,914	916	3,759	
M3	1,381,911	128,921	266,012	4,884	7,874	
M4	8,362,118	887,131	646,076	820,852	965,707	
M5	32,097,509	3,770,360	1,673,995	3,686,481	2,996,577	
M6	299,486	18,998	957,884	68,607	91,838	
M7	232,972	3,891	72,477	4,724	25,234	
TOTAL	46,309,882	4,909,217	3,984,751	4,775,039	42,638,853	
<u>Sumter County</u>						
S1	79,809	0	78,294	1,006	1,821	
S1	523,749	4,352	230,490	4,262	22,030	
S3	4,709,767	216,705	828,744	38,525	545,612	
TOTAL	5,313,325	221,057	1,137,528	43,793	569,463	



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