



# **Volume 1-2 Technical Data Report Apalachee Region**

## **Chapter V Regional Shelter Analysis**

Prepared by

**APALACHEE REGIONAL PLANNING COUNCIL  
2015**





## Table of Contents

A. Overview .....	V-1
B. Hotel Availability .....	V-2
C. Providing Public Shelter .....	V-2
D. Criteria for Hurricane Evacuation Shelter .....	V-3
1. Storm Surge Inundation .....	V-3
2. Freshwater Flooding.....	V-3
3. Wind Hazards Vulnerability .....	V-4
4. Hazardous Materials.....	V-4
E. Special Needs Shelters.....	V-4
1. Florida Statutes related to Special Needs Shelters.....	V-4
2. Special Needs Registration.....	V-5
3. Standards for Special Needs Shelters.....	V-5
4. Estimating Special Needs Shelter Demand.....	V-5
5. Regional Special Needs Shelters.....	V-8
6. Public Private Partnerships.....	V-10
F. Pets and Evacuees .....	V-11
1. Pet Issues are People Issues.....	V-11
2. Policy Guidance to Residents.....	V-11
G. Shelter Inventories .....	V-12
H. Public Shelter Demand.....	V-15
I. Dealing with Shelter Shortfalls and Challenges.....	V-17

## List of Tables

Table V-1	Hotel Availability in Evacuation Scenarios .....	V-2
Table V-2	Population Demographics Affecting Special Needs Shelter Demand.....	V-6
Table V-3	Households Requiring Assistance to Evacuate .....	V-7
Table V-4	Households Registered as Having Special Needs .....	V-7
Table V-5	Households Needing Agency Assistance to Evacuate .....	V-8
Table V-6	Special Needs Shelter Demand Guidance (2010 Base Scenarios) .....	V-10
Table V-7	Apalachee Region Shelter Inventory and Surge Analysis .....	V-13
Table V-8	Public Shelter Demand for Hurricane Evacuation Base Scenarios .....	V-15
Table V-9	Public Shelter Demand for Hurricane Evacuation Operational Scenarios.....	V-16



# CHAPTER V

## REGIONAL SHELTER ANALYSIS



### A. Overview

An essential element of any evacuation plan is the ability to shelter the relocated residents throughout the duration of the event. Evacuees will seek several alternative forms of shelter at various distances from their origin. These alternatives may include a local public shelter, a hotel or motel, a friend or relative's home and destinations in an adjacent county or outside of the region. Shelter destination tendencies of potential evacuees must be identified for two major reasons. First, so that adequate public shelter facilities can be provided for the numbers of evacuees expected to seek them. Secondly, the shelter analysis is needed to more accurately simulate the expected destination assignments and vehicle volume movement in the quantification of evacuation times.

Shelter preparedness is a very crucial element in the Statewide Regional Evacuation Study (SRES) because of the vast numbers of evacuees and the potential number of vulnerable residents seeking shelter. While other types of hazards (flooding, wildfire, hazardous materials and terrorism/civil disturbances) may result in the need for mass care and shelter operations, the event which is both the most probable and potentially most challenging, is an approaching hurricane.

Historically, major disasters result in large scale shelter operations. For example, operations during the Hurricane Andrew evacuation in August 1992 resulted in the largest county shelter operation in U.S. history (approximately 200,000 sheltered). One of the largest regional evacuation shelter operations in the U.S. occurred in the Tampa Bay region in response to Hurricane Elena in 1985 (350,000 sheltered). In 2005 when hurricanes threatened the Gulf Coast, Red Cross disaster relief workers and local governments were preparing hundreds of evacuation shelters. The organization pre-positioned supplies, including kitchens, prepackaged meals and emergency response vehicles (ERVs). Nearly 500,000 evacuees of Hurricanes Katrina, Rita and Wilma stayed in Red Cross shelters ([www.redcross.org](http://www.redcross.org)).

Public education in Florida has stressed to evacuees that the choice to go to a public shelter should not be the first choice in destinations. Other options, especially the homes of friends and relatives and hotel/motels in non-evacuation zones, provide a more comfortable alternative for most residents. According to the behavioral surveys conducted in 2006 and 2008 for the SRES, part of that message is getting across to residents. The majority of evacuees go to the homes of friends or relatives (50 – 65%). Approximately 5% - 20% will seek a hotel or motel for refuge depending on age, income and other demographic characteristics. Hotel availability is also a key factor.

## B. Hotel Availability

In the Apalachee region there are approximately 8,000 hotel/motel rooms. All of the available rooms in Franklin County are within an Evacuation Level A or B Zone and so would not be available for most hurricane scenarios.

Some of the Tourist and Visitors Bureaus in major metropolitan areas currently have a mechanism in place to track available units throughout a regional evacuation. This capability is essential to assist those evacuees looking for hotel/motel units. (Although it should be strongly recommended that families seeking accommodations make those reservations before they begin their evacuation trip). In a major evacuation, the State Tourism and Development Council will seek to consolidate and augment this local information in real time. The second major challenge is to then communicate hotel/motel availability within the region and the state to evacuees locally as well as those on the road. This may reduce the trip of those searching for hotel/motels in the vicinity; thereby, hopefully reducing the evacuation congestion and evacuation clearance times.

**Table V-1**  
**Hotel/Motel Availability in Hurricane Evacuation Scenarios**

Storm Surge	Calhoun	Franklin	Gadsden	Gulf	Jackson	Jefferson	Liberty	Leon	Wakulla	Region
1	N/A	57	N/A	20	N/A	0	N/A	0	0	77
2	N/A	400	N/A	30	N/A	0	N/A	0	25	455
3	N/A	0	N/A	50	N/A	0	N/A	0	80	130
4	N/A	0	N/A	30	N/A	0	N/A	0	100	130
5	N/A	0	N/A	32	N/A	0	N/A	140	0	172
Non-Surge	24	0	488	45	945	196	13	6,000	0	7,771

Source: Florida Dept. of Professional and Business Regulations, 2009

## C. Providing Public Shelter

Although there are other options for most evacuees, there will always be a demand for public shelter. In the Apalachee region, the demand for public shelter has the potential to be significant because of the demographics of the evacuating population and the limited ability to evacuate out of the region.

Public shelter demand is the result of several factors:

- Evacuees may not have friends or relatives in a safe location.
- Evacuees may not have the means to evacuate to a hotel/motel or out of the region.
- Evacuees may not be able to locate vacant hotel/motel rooms outside of evacuation zones in the region. (Space is limited and demand will be high.)
- Evacuees may not plan ahead or understand their options.
- Some evacuees choose public shelter because they feel it is safer there than in their home.
- Some evacuees may wish to be with others.
- Evacuees may not evacuate in a timely fashion or may get stuck in evacuation traffic and may have to seek public shelter at the last minute as a last resort.

## **D. Criteria for Hurricane Evacuation Shelter Selection**

Shelter selection involves a number of factors - structural and non-structural - and requires close coordination with local officials responsible for public safety. Technical information contained in evacuation studies, storm surge and flood mapping, and other data can now be used to make informed decisions about the suitability of buildings as shelters. Accordingly, an interagency group under American Red Cross leadership, has prepared criteria for the selection of shelters entitled "Standards for Hurricane Evacuation Shelter Selection, ARC 4496" (ARC 4496). ARC 4496 is the standard used to determine hurricane shelters and should be referenced when selecting buildings for use as shelters.

The State of Florida has an aggressive survey program for all structures considered for public shelter use. State and county officials work with local school boards and emergency management agencies to identify structures for retrofit and to implement the requirements of the Enhanced Hurricane Protection Areas (EHPA) in new school construction. The requirements and retrofit projects have increased the public shelter capacity in the region since 2000.

In the experience of the Red Cross and emergency management officials, the majority of people evacuating because of a hurricane threat generally provide for themselves and seek hotels or motels or stay with friends and relatives. However, for those who do seek public shelter, safety from hazards associated with hurricanes is paramount. These hazards include surge inundation, rainfall flooding, high winds and hazardous materials.

### **1. Storm Surge Inundation**

In general, hurricane evacuation shelters should not be located in areas vulnerable to hurricane surge inundation. The National Hurricane Center SLOSH model for the Apalachee Region is very helpful in determining the potential level of surge inundation in this area. The shelters

To determine whether particular public shelter structures are vulnerable to potential storm surge, an analysis of each structure's elevation and geographic location in relation to surge was conducted utilizing the SLOSH model.

### **2. Freshwater Flooding**

While it is not historically considered life-threatening, rainfall flooding should be considered in the hurricane evacuation shelter selection process. Riverine inundation areas shown on Flood Insurance Rate Maps (FIRMs), as prepared by the National Flood Insurance Program, should be reviewed. FIRMs should also be reviewed in locating shelters in inland areas.

The appropriate flood plain designation is identified in the tables along with the storm surge analysis. While locating facilities outside of the 100-year floodplain is a priority, this is very difficult in the Apalachee region. Therefore, measures such as documenting the elevation of the first floor above the base flood elevation (BFE), meeting NFIP regulations and the provision of adequate emergency supplies sufficient to meet the immediate response needs until flood waters recede are ensured. Please note: The ARC 4496 guidelines also recommend avoiding the 500-year floodplain.

### 3. Wind Hazards Vulnerability

Consideration of any facility for use as a hurricane evacuation shelter must take into account wind hazards. Both design and construction problems may preclude a facility from being used as a shelter. Refer to the structural considerations listed in ARC 4496 for guidelines on building selection.

### 4. Hazardous Materials

The possible impact from a spill or release of hazardous materials should be taken into account when considering any potential hurricane evacuation shelter. All facilities manufacturing, using, or storing hazardous materials (in reportable quantities) are required to submit Material Safety Data Sheets to state and local emergency officials. These sources can assist in determining the suitability of a potential hurricane evacuation shelter or safe distances for potential shelters near facilities that manufacture, use, or store hazardous materials.

Those facilities which store extremely hazardous materials on-site have been identified in the CFI database.

## E. Special Needs Shelters

A special needs shelter (SpNS) is a temporary emergency facility capable of providing care to residents whose medical condition exceeds the capabilities of the Red Cross Shelter but is not severe enough to require hospitalization. County Health Department staff support these shelters.

The Florida Division of Emergency Management, (DEM) Department of Health (DOH), local emergency management agencies, health care agencies have worked together over the last decade to establish SNS standards, protocols and technical assistance that can be integrated into the Florida Emergency Management System.<sup>1</sup>



The mission is to develop a standardized, comprehensive, county and regional approach to special needs shelter operation that ensures continuity in services and quality care to evacuees, caregivers and staff during their stay in a SNS.

### 1. Florida Statutes Related to Special Needs Shelters

- [F.S. Ch. 252.355](#) - Registry of persons with special needs; notice. This was updated in 2015 and includes language that the Florida Division of Emergency Management, in coordination with each local emergency management agency, shall maintain a registry of persons with special needs.
- [F.S. Ch. 252.356](#) - Emergency and disaster planning provisions to assist persons with disabilities or limitations.
- [F.S. Ch. 381.0303](#) - Healthcare Practitioner Recruitment for Special Needs Shelters
- [FAC 64-3](#) - Florida Administrative Code related to Special Needs Shelter

<sup>1</sup> <http://www.doh.state.fl.us/PHNursing/SpNS/SpecialNeedsShelter.html>

## 2. Special Needs Registration

Each county emergency management office either maintains or works with the county health department to maintain and annually update its special needs registry. The criteria a person must meet to be eligible to register for a SpNS is available in FAC 64-3. It is important that this registry is updated prior to June 1<sup>st</sup> annually, in advance of hurricane season. This includes transportation disadvantaged residents who need transportation assistance only.

## 3. Standards for Special Needs Shelter Selection<sup>2</sup>

Facilities selected as SpNSs should meet additional structural criteria as well as shelter management standards. New legislation has identified special criteria for SpNSs which has proven to be a challenge for local governments. In addition to meeting the ARC 4496 hurricane safety criteria, special needs shelters should have emergency power supported air-conditioning and have capacities based upon 60 square feet per client. DEM, DOH and local agencies are working together to address the challenges of the transition to meeting these expectations as well as the resolving problems related to SpNSs.

DOH guidance for design and selection of facilities to be used as a SpNSs in a hurricane/disaster event is consistent with the American Red Cross publication "MASS CARE - Preparedness and Operations (ARC 3041)" and "Mass Care Facility Form 6564." The SNS facility must also meet all Florida Building Code (FBC) and Americans with Disabilities Act (ADA) accessibility requirements. Preference is given to school facilities designed, constructed and inspected to comply with the public shelter design criteria, EHPA requirements as set forth in section 423.25, FBC.

## 4. Estimating Special Needs Shelter Demand

Estimating the demand for SpNS space is challenging for state and local emergency management officials. Certain key assumptions must be made and complexities addressed:

### a. County and Regional Profiles

The demographics of the county and region must be considered, especially age, disability and income. Typically, the older the overall population of the county/region is, the older the shelter population and greater the demand for public shelter. Historically, the demographics of the general and SpNS populations have been skewed based on age, disability and income. Therefore, the shelter populations may reflect trends but will not match the overall demographic profile of the county or region. Both the general shelter population and, more definitively, the special needs population, will tend to be much older, with more disabilities and with fewer financial resources.

Below is a table which reflects the demographics of the county and region (See Chapter I Population and Demographics). Please note the differences between counties in the region. The differences in age and percentage with disabilities will impact the potential demand for SpNS.

---

<sup>2</sup> Created: 10/14/05, Revised: 11/16/05; 01/20/06

**Table V-2**  
**Percentage of Population Affecting Special Needs Shelter Demand**

Jurisdiction	Age 65+ 2010 <sup>3</sup>	Age 65+ 2015 <sup>4</sup>	Disabilities <sup>5</sup>	Disabilities Age 65 +	Disabilities Age 75+
Calhoun	15.73	16.87	26	7.81	3.69
Franklin*	20.02	22.75	25.76	8.25	4.51
Gadsden	13.57	15.55	25.59	6.81	3.59
Gulf*	17.13	19.78	26.57	9.18	4.36
Jackson	16.09	18.28	28.32	8.88	5.3
Jefferson*	15.75	18.60	24.44	8.33	4.77
Leon*	8.92	10.50	14.03	3.51	2.1
Liberty	11.43	12.95	28.42	8.31	3.5
Wakulla*	12.73	15.96	19.88	4.24	2.25
Region	11.44	14.76	18.65	5.1	2.88

\*Counties impacted by storm surge.

### **b. Special Needs Population Data from the Behavioral Survey**

The behavioral survey of Florida residents completed as part of the SRES contained four questions designed to elicit information regarding the prevalence of "special needs" households:

- In an evacuation, would you or anyone in your household require assistance in order to evacuate?
- Would the person just need transportation, or do they have a disability or medical problem that would require special assistance?
- Would that assistance be provided by someone within your household, by an outside agency, or by a friend or relative outside your household?
- Is that person registered with the County as a person who would have special needs during a hurricane evacuation?

Responses to all four questions are reported in the Behavioral Survey Reports. In those reports responses are shown by region, county, evacuation zone and housing type. The tables below show responses for the entire statewide sample. However, the responses do not constitute a statewide random sample of households. In every coastal county, regardless of population, 400 interviews were completed. In every non-coastal county 150 interviews were completed. Therefore smaller counties were "over-represented" statistically when the data is aggregated statewide.

<sup>3</sup> EDR1a

<sup>4</sup> EDR1a

<sup>5</sup> The data on disability status were derived from answers to two long-form questionnaire items. The first was a two-part question that asked about the existence of the following long-lasting conditions: (a) blindness, deafness, or a severe vision or hearing impairment (sensory disability) and (b) a condition that substantially limits one or more basic physical activities, such as walking, climbing stairs, reaching, lifting, or carrying (physical disability). This question was asked of a sample of the population 5 years old and over. The second was a four-part question that asked if the individual had a physical, mental, or emotional condition lasting 6 months or more that made it difficult to perform certain activities. The four activity categories were: (a) learning, remembering, or concentrating (mental disability); (b) dressing, bathing, or getting around inside the home (self-care disability); (c) going outside the home alone to shop or visit a doctor's office (going outside the home disability); and (d) working at a job or business (employment disability). Categories (a) and (b) were asked of a sample of the population 5 years old and over; (c) and (d) were asked of a sample of the population 16 years old and over. For data products that use a disability status indicator, individuals were classified as having a disability if any of the following three conditions were true: (1) they were 5 years old and over and had a response of "yes" to a sensory, physical, mental or self-care disability; (2) they were 16 years old and over and had a response of "yes" to going outside the home disability; or (3) they were 16 to 64 years old and had a response of "yes" to employment disability.

**(1) Households with Special Needs**

In the Apalachee region, 10% of the interviewees said that someone in their home had a disability or medical problem that would require special assistance to evacuate (Table V-3). The figure included people with both medical needs and transportation assistance. Those needs were greater in mobile homes than in site-built homes.

**Table V-3**  
**Percentage of Households Requiring Assistance to Evacuate**

Type of Housing	Evacuation Zone						
	Cat 1	Cat 2	Cat 3	Cat 4	Cat 5	Non-Surge	Inland
Site Built Homes	33	25	25	18	18	13	31
Mobile Homes	64	33	33	33	33	10	3

**(2) Households Registered as Having Special Needs**

Approximately 28% of the surveyed households indicated that someone in the home was registered with their county as a person with special needs (Table V-4). The figure was higher for site built homes residents than mobile home residents, but there was no clear trend with respect to storm surge zone.

**Table V-4**  
**Percentage of Households Registered as Special Needs**

Type of Housing	Evacuation Zone						
	Cat 1	Cat 2	Cat 3	Cat 4	Cat 5	Non-Surge	Inland
Site Built Homes	9	39	39	35	35	30	25
Mobile Homes	27	11	11	13	13	29	6

**(3) Households Needing Agency Assistance**

Twenty percent of all households said that assistance from an agency (rather than assistance from a friend or relative) would be needed to help a person with a disability or medical problem evacuate (Table V-5). Some respondents said they didn't know who would provide the assistance. Both calculations were higher for mobile homes than for site-built homes.

**Table V-5**  
**Percentage of Households Requiring Agency Assistance to Evacuate**

Type of Housing	Evacuation Zone						
	Cat 1	Cat 2	Cat 3	Cat 4	Cat 5	Non-Surge	Inland
Site Built Homes	18	20	20	25	25	20	13
Mobile Homes	49	15	15	14	14	29	26

While the behavioral study provided an estimate of demand for special needs shelter for the first time, there are concerns:

- The general public interviewed in the statewide survey does not understand the complexities of the concept of “special needs” as used in emergency shelter planning. While residents may have medical needs, they would need to be screened in order to determine the most appropriate type and level of care.
- Historically, respondents over-estimate the demand for any public shelter option.
- Demand will vary by storm severity and evacuation rates.
- Demand will be higher based on housing type (MH), age and income.
- The number of respondents to these questions was very low at the county level.

### 5. Regional Special Needs Shelters

A report was generated after the 2004 and 2005<sup>6</sup> hurricane seasons which identified that a significant portion of the registered special needs populations found alternative shelter and/or elected not to go to the special needs shelter during the event. This trend has been identified in many recent evacuations. The report stated that “the statewide total of registrants is about 38,500, but local emergency managers estimate that only about 14,000 clients will actually seek public Special Needs Shelters. In 2004 the DOH’s maximum census (summation of all individual counties’ highest single day totals, plus the Orlando super shelter and a SWF regional shelter) was 6,364 or about half of local emergency managers’ best estimate of demand.”

However, when an event threatens, local emergency management agencies and DOH are typically flooded with additional requests for special needs shelter and transportation. This puts an additional burden on emergency management and responders to follow up with these citizens to determine the most appropriate level of care and shelter option. Complicating the situation is the availability of appropriate space in assisted living facilities, skilled nursing facilities and hospitals immediately prior to the event. In prior evacuations, the Governor issued an executive order waiving occupancy limits in those facilities in order to provide for continuity of care for those residents who require a higher level of care. This is a critically important element in special needs planning.

What was not reflected in the 2005 report was the impact of special needs population in the general shelter population. Depending on the demographics in the community, a significant portion of the general shelter population had or developed (as the event proceeds and stress levels increase) serious health issues.

<sup>6</sup> ***2005 Special Needs Shelter Report***, June 2005, DEM and DOH

It is estimated that in the 2004 and 2005 shelter operations from 30-60% of the general shelter population either arrived at the shelter with conditions which warranted a higher level of health care or developed health issues which warranted care associated with a special needs shelter or higher levels of care. For the most part, many of these citizens had driven themselves to the shelter and found their health deteriorate given the stress of the event and shelter environment. This situation is not unique to the 2004 or 2005 hurricane season. It has been documented in many other historical events. In addition the DOH reported that many caregivers began to experience health issues as the event progressed.

These issues may be mitigated through a continued push to pre-register special needs residents. Coordination with local home health agencies and health care professionals has reduced this impact, but it remains an issue.

Each county emergency management agency is responsible for maintaining the registry of persons with special needs. The names on those lists are protected; however, the number of registrants is available and reflects a starting point for determining demand within the county. It should be noted that the registry is fluid. It varies day to day (as does the clientele receiving home health care). It also varies by month as many special needs clients are seasonal residents.

Demographics within the community as well as hazard vulnerability, available health care resources, the extent and duration of power outages and presence of extended family support impact the potential demand for special needs shelter capacity. The Table V-7 below identifies the current (2010) special needs registrants, current special needs shelter capacities and an estimate of demand based on the survey findings. Twenty percent of the households which need assistance to evacuate in the Apalachee region require an outside agency to assist with evacuations. This represents approximately 2% of all households in the region. These percentages vary by county and are reflected in the planning percentage listed in Table V-7 below.

Special needs shelter demand was calculated using the 2015 Evacuating Population by Base Scenario, Table IV-4 found on page IV-11 of Chapter IV – Regional Vulnerability and Population Analysis and data from the behavioral study indicating the need for outside agency assistance during an evacuation. It is important to note that of the households that need assistance to evacuate, only 27% on average, have registered with their county emergency management agency.

In the Apalachee region, special needs shelters are regionally based. Evacuees from Franklin and Wakulla Counties evacuate to the special needs shelter in Tallahassee, while evacuees from Gulf County travel to the special needs shelter in Marianna when the need arises. In addition, the special needs shelter in Tallahassee also serves Taylor County from the North Central Florida Region.

**Table V-6  
Special Needs Shelter Demand<sup>7</sup>  
(2015 Base Scenarios)**

County	Number of Special Needs Registrants (Medical)	Planning %	Existing Capacity (2015)	SPECIAL NEEDS SHELTER DEMAND (Based on Evacuating Population 2015 Base Scenarios)				
				Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Calhoun		1.3%	0	63	69	80	85	91
Franklin		2.0%	0	163	213	214	214	214
Gadsden		2.7%	250	462	505	547	590	632
Gulf	12	1.8%	0	125	168	201	207	208
Jackson	539	.7%	33	89	100	121	132	143
Jefferson		3.5%	0	211	227	244	266	278
Leon	550	2.0%	705	728	977	1,510	1,795	2,038
Liberty	25	6.0%	0	214	227	249	262	275
Wakulla	94	2.0%	0	370	406	516	520	523
Region			988	2,425	2,892	3,682	4,071	4,402

Most counties are transitioning toward the new requirements for special needs shelters including the space requirement of 60 sq. ft. per person and the emergency power supported air-conditioning. As indicated, additional space must be provided for caregivers, family members, pets, medical equipment and supplies. Relocation of special needs clients over long distances is dangerous as well as taxing on local resources; therefore, if there is not sufficient capacity within a county, a regional solution must be sought.

## 6. Public Private Partnerships

It was hoped that legislation in 2006 would bring more support to the local efforts to meet the challenges of addressing special needs in the community. Home health care agencies which provide care to special needs populations throughout the region have been tasked to provide continuity of care during disasters. This has been interpreted as the time contracted prior to the event, i.e., 2 – 4 hours a week. It is hoped that this requirement will

- (1) provide earlier registration/ evaluation of special needs populations;
- (2) provide additional support for Departments of Health staff in the special needs shelters and
- (3) provide an overall benefit through private-public partnerships to ensure no one is "left behind."

The legislation also recommended the identification of pediatric and other special units, provided funding for retrofit and generators at designated special needs shelters, where required, and brought together a host of state, local and private sector agencies to address the needs of their clients in a disaster situation.

<sup>7</sup> For Planning Purposes

## F. Pets and Evacuees

### 1. Pet Issues are People Issues

- Fifty-eight percent of U.S. households own animals.
- The media often reports the needs of animals, both domestic and wild, affected by disasters. Following Katrina thousands of pets were rescued although many did not survive.
- Some people are more concerned for their animals in disasters than they are for themselves. This may impair their ability to make sensible decisions about their own safety and that of rescue workers. Examples include evacuation failures and re-entry attempts, and unsafe rescue attempts.
- Following Hurricane Katrina some abandoned pets, hungry, disoriented and frightened became dangerous to rescue workers and returning residents. Packs of dogs – once beloved pets – had to be destroyed



In 2006, the Florida Legislature sought to address this serious concern. Chapter 252.3568, F.S. addressed the emergency sheltering of persons with pets. In accordance with s. 252.35, the Division shall address strategies for the evacuation of persons with pets in the shelter component of the state comprehensive emergency management plan and shall include the requirement for similar strategies in its standards and requirements for local comprehensive emergency management plans. The Department of Agriculture and Consumer Services shall assist the Division in determining strategies regarding this activity. Therefore, the Division of Emergency Management has put forward the following policies:

- Establish Policy Guidelines
- Develop Standard Operating Guides, Procedures and Best Practices
- Conduct Training & Implementation

### 2. Policy Guidance to Residents

- Residents must include pets in family disaster plans.
- Take your pets with you when ordered to evacuate.
  - The best plan is to evacuate with your pets to friends and/or family.
  - Identify and promote pet friendly policies of hotels and motels during emergencies.
  - Shelters are life boats for both you and/or your pets.
- Evacuation support should include people with pets
  - Evacuation Routes
  - Buses
  - Special Needs
- Sheltering: no one with pets should be turned away from a shelter
  - Options
  - Co-located Pet Friendly Shelters
  - Centralized Pet Shelters
  - Boarding facilities and animal shelters, volunteer groups
- Shelters: Service animals should never be turned away or separated from their owner.

- Animal rescue teams should be integrated in ESF 9 - Search and Rescue (SAR)
- Animal SAR teams should be typed and credentialed for the level of service of which they are capable.

## **G. Shelter Inventories**

The coastline of the Apalachee region is at great risk from storm surge. There are no ARC 4496 compliant shelters in Franklin County and only five total in Gulf, Jefferson and Wakulla Counties. Therefore, evacuating communities are sheltered mostly in Leon or Jackson Counties. Shelter demand in the Apalachee region should be generated regionally rather than by county.

It should be noted that the shelters listed are dynamic and their capacities are estimates. Shelter inventories change annually as facilities are added or drop out for retrofit, construction or repairs. They are constantly being evaluated to ensure that the safest facilities are used. The capacities are based on useable space and an estimated 20 square foot per person.

**Table V-7  
Apalachee Region Shelter Inventory and Surge Analysis**

NAME	ADDRESS	CITY/COUNTY	RISK CAP @ 20 sq ft <sup>2</sup>	Sp Needs Cap @60 sq ft	Pet Friendly	Agency Support	Function	Vulnerability		
								Surge	Evac Zone	Flood
BLOUNTSTOWN HIGH	18597 NE STATE ROAD 69	BLOUNTSTOWN/CALHOUN	121		NO	ARC	SCHOOL			
EAST GADSDEN HIGH	27001 BLUE STAR HIGHWAY	HAVANA/GADSDEN	3,092	250	NO	ARC	SCHOOL			
HAVANA MIDDLE	1210 KEMP ROAD	HAVANA/GADSDEN	967		NO	ARC	SCHOOL			
HONEYVILLE COMMUNITY CENTER	240 HONEYVILLE PARK DRIVE	WEWAHITCHKA/GULF	232		NO	ARC	COMMUNITY CENTER			
WEWAHITCHKA MIDDLE	602 EAST RIVER RD	WEWAHITCHKA/GULF	228		NO	ARC	SCHOOL			
CHIPOLA JUNIOR COLLEGE	3094 INDIAN CIRCLE	MARIANNA/JACKSON	499		NO	ARC	SCHOOL			
MARIANNA HIGH	3546 CAVERNS ROAD	MARIANNA/JACKSON	3,332	33	NO	ARC	SCHOOL			
JEFFERSON COUNTY HIGH	50 DAVID ROAD	MONTICELLO/JEFFERSON	809		NO	ARC	SCHOOL			
BUCKLAKE ELEMENTARY	1600 PEDRICK ROAD	TALLAHASSEE/LEON	1,466		NO	ARC	SCHOOL			
CANOPY OAKS ELEMENTARY	3250 POINT VIEW DRIVE	TALLAHASSEE/LEON	2,099		NO	ARC	SCHOOL			
CHAIRES ELEMENTARY	4774 CHAIRES CROSSROADS	TALLAHASSEE/LEON	1,233		NO	ARC	SCHOOL			
DEERLAKE MIDDLE	9902 DEERLAKE DRIVE WEST	TALLAHASSEE/LEON	1,651		NO	ARC	SCHOOL			
DESOTO TRAILS ELEMENTARY	5200 TREDINGTON PARK	TALLAHASSEE/LEON	1,512		NO	ARC	SCHOOL			
FAMU ENGINEERING	BLDG 77	TALLAHASSEE/LEON	517		NO	ARC	SCHOOL			
FLORIDA HIGH	3000 SCHOOLHOUSE ROAD	TALLAHASSEE/LEON	1,463	705	NO	ARC	SCHOOL			

Orange-shaded = Special Needs Shelter  
ARC = American Red Cross

NAME	ADDRESS	CITY/COUNTY	RISK CAP @ 20 sq ft <sup>8</sup>	Sp Needs Cap @60 sq ft	Pet Friendly	Agency Support	Function	Vulnerability		
								Surge	Evac Zone	Flood
FORT BRADEN ELEMENTARY	1510 BLOUNTSTOWN HWY	TALLAHASSEE/LEON	1,681		NO	ARC	SCHOOL			
HARTSFIELD ELEMENTARY	1414 CHOWKEEBIN NENE	TALLAHASSEE/LEON	428		NO	ARC	SCHOOL			
HAWKS RISE ELEMENTARY	205 MEADOW RIDGE DRIVE	TALLAHASSEE/LEON	1,736		NO	ARC	SCHOOL			
LAWTON CHILES HIGH	7200 LAWTON CHILES LANE	TALLAHASSEE/LEON	3,920		NO	ARC	SCHOOL			
MONTFORD MIDDLE	5789 PIMLICO	TALLAHASSEE/LEON	385		NO	ARC	SCHOOL			
OAK RIDGE ELEMENTARY	4350 SHELFER ROAD	TALLAHASSEE/LEON	513		NO	ARC	SCHOOL			
ROBERTS ELEMENTARY	5777 CENTERVILLE ROAD	TALLAHASSEE/LEON	1,715		NO	ARC	SCHOOL			
SPRINGWOOD ELEMENTARY	3801 FRED GEORGE ROAD	TALLAHASSEE/LEON	1,271		NO	ARC	SCHOOL			
WR TOLAR K-8	205 MEADOW RIDGE DR	BRISTOL/LIBERTY	1,151		NO	ARC	SCHOOL			
CRAWFORDVILLE ELEMENTARY	379 ARRAN ROAD	CRAWFORDVILLE/WAKULLA	400		NO	ARC	SCHOOL			✓
RIVERSINK ELEMENTARY	530 LONNIE RAKER LANE	CRAWFORDVILLE/WAKULLA	400		NO	ARC	SCHOOL		✓	
<b>TOTAL</b>			<b>32,821</b>	<b>988</b>						

Orange-shaded = Special Needs Shelter

ARC = American Red Cross

## H. Public Shelter Demand

The general response model, post-hurricane behavioral surveys of residents in the Apalachee region and past experience was used to determine public shelter demand. The number of evacuees who choose public shelter as their evacuation destination is based on demographic characteristics of the population including income and age, risk area and housing (mobile home versus site built homes). The planning assumptions regarding anticipated shelter use were presented in the Regional Behavioral Analysis (See Chapter III, Appendices), and were applied to the projected Hurricane Evacuation Population estimates for both the *Base Planning Scenarios* as well as the *Operational Scenarios*.

As discussed in Chapter IV, the Base Planning Scenarios assume 100% compliance of the vulnerable populations (surge-vulnerable and mobile home residents) plus the "shadow evacuation". The Operational Scenarios use the participation rates from the behavioral analysis to determine the evacuation rates.

**Table V-8**  
**Public Shelter Demand by Base Scenario**

	Capacity	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
<b>2015</b>						
Calhoun County	121	797	860	984	1,047	1,110
Franklin County	0	394	531	533	533	533
Gadsden County	4,059	2,535	2,877	3,219	3,561	3,904
Gulf County	460	455	592	703	733	740
Jackson County	3,381	781	1,005	1,452	1,678	1,900
Jefferson County	809	747	792	844	901	942
Leon County	21,077	2,777	3,417	4,688	5,395	6,025
Liberty County	1,151	570	603	673	707	742
Wakulla County	800	1,034	1,140	1,349	1,358	1,367
Total	31,858	10,090	11,816	14,445	15,912	17,262
	Capacity	Scenario 6	Scenario 7	Scenario 8	Scenario 9	Scenario 10
<b>2020</b>						
Calhoun County	121	831	895	1,025	1,090	1,154
Franklin County	0	394	531	533	533	533
Gadsden County	4,059	2,584	2,932	3,282	3,630	3,978
Gulf County	460	459	598	709	738	746
Jackson County	3,381	783	1,008	1,458	1,684	1,909
Jefferson County	809	775	821	873	934	975
Leon County	21,077	2,908	3,578	4,910	5,648	6,307
Liberty County	1,151	605	642	714	751	788
Wakulla County	800	1,123	1,236	1,465	1,474	1,484
Total	31,858	10,462	12,241	14,968	16,482	17,873

**Table V-9  
Public Shelter Demand by Operational Scenario**

	<b>Capacity</b>	<b>Scenario 1</b>	<b>Scenario 2</b>	<b>Scenario 3</b>	<b>Scenario 4</b>	<b>Scenario 5</b>
<b>2015</b>						
Calhoun County	121	429	529	864	999	999
Franklin County	0	278	326	394	438	492
Gadsden County	4,059	0	2,046	3,191	3,626	3,626
Gulf County	460	311	363	555	609	675
Jackson County	3,381	0	755	1,288	1,819	1,819
Jefferson County	809	546	625	786	899	899
Leon County	21,077	1,709	4,048	4,932	5,700	5,700
Liberty County	1,151	302	364	599	662	662
Wakulla County	800	690	755	968	1,177	1,277
Total	31,858	4,265	9,811	13,577	15,929	16,149
	<b>Capacity</b>	<b>Scenario 6</b>	<b>Scenario 7</b>	<b>Scenario 8</b>	<b>Scenario 9</b>	<b>Scenario 10</b>
<b>2020</b>						
Calhoun County	121	448	551	899	1,040	1,040
Franklin County	0	278	326	394	438	492
Gadsden County	4,059	0	2,083	3,252	3,694	3,694
Gulf County	460	313	364	559	614	681
Jackson County	3,381	0	757	1,291	1,826	1,826
Jefferson County	809	564	646	814	931	931
Leon County	21,077	1,791	4,238	5,165	5,966	5,966
Liberty County	1,151	322	385	638	703	703
Wakulla County	800	749	820	1,051	1,277	1,386
Total	31,858	4,465	10,169	14,064	16,489	16,718

Using the behavioral assumptions based on the General Response Model has a significant impact on the potential shelter demand calculations. As noted in Chapter III, Regional Behavioral Analysis, the use of public shelters for residents in site built homes ranges from 5% - 10% depending on age and income. Traditionally, a public shelter use rate of between 10%-25% was used for planning purposes. However, the trend for less reliance on public shelters has been recognized in past evacuations throughout the Gulf and Atlantic states.

It should be noted that Leon County serves as the regional hub for shelter space. So while individual counties may be deficient in shelter space, such as Franklin County, an agreement exists that Leon County will serve as a "host" sheltering county.

In terms of community resiliency, without the requirement of Enhanced Hurricane Protection Act standards, new schools may not be built to standards which would insure the schools would survive the impact of a major hurricane. In addition the need for more special needs shelters must also be addressed in both State and local plans.

Therefore, local emergency management may use different assumptions for both public and special needs shelters within the operational plans as reflected in the county comprehensive emergency management plans.

## **I. Dealing with Shelter Shortfalls and Challenges**

Strategies have been implemented at the state and local level to address the shelter issues for the past ten years. Additional funding for shelter retrofit and generators for special needs shelters was allocated in 2006; however, the economic downturn has taxed federal, state and local resources.

- Public information, both before the emergency and during the evacuation, should stress that while evacuation out of the most vulnerable areas is critical, (1) residents should seek alternative types of refuge before and during the emergency if feasible; and (2) that persons on high ground offer their homes as refuge to friends/relatives in hurricane vulnerable areas.
- Impact fees for development within the Coastal High Hazard Area (CHHA) and the Hurricane Vulnerability Zone (Level C), Wildfire Urban Interface and the 100-year flood zone should be used to mitigate the impacts of further development in hurricane prone areas.
- Growth management strategies should minimize development which would increase allowable density or put people with special needs (critical facilities) in designated vulnerable areas.
- Both local governments and local school boards, in cooperation with local emergency management, should ensure that new schools are sited, designed and constructed to be disaster-resistant and appropriate for shelter use. In addition, windows in existing facilities should be protected/retrofitted to mitigate damage and provide more suitable public shelter. Funding to cover additional construction costs to the School Boards to upgrade to EHPA standards should be sought.
- Continue to encourage the State Legislature to fund the necessary retrofits (for both public and private facilities (particularly schools, hospitals and nursing homes) and mandate appropriate design/construction standards.
- Public outreach should stress that persons with pets prepare ahead for their pets and recognize the extremely limited capacity for pets at public shelters. Emergency management and local school boards need to continue to address this issue.
- Public outreach should stress that persons with special needs speak to their physician/health care provider and register with county emergency management if they require additional assistance.

- In a major evacuation and where necessary, the Governor's Office should, through Executive Order, waive capacity limits in assisted living facilities and nursing homes to ensure appropriate continuity of care and level of care is maintained in the region.
- It should be recognized that providing the appropriate level of care and continuity of care will take ongoing cooperation and communications between and among the public and private sector health care providers. Emergency management, the local health departments and health care providers should partner to develop the plans and shelter locations for our residents with special needs.
- Phase shelter openings: The shelter demand estimates may be higher depending on the strength and projected track of the threatening hurricane as well as the response of local government and State officials. The American Red Cross chapters, local emergency management agencies and local school boards developed strategies to phase the opening of selected public shelters depending on the evacuation level and projected shelter demand.