

EXECUTIVE SUMMARY

The Division of Emergency Management (Division), as directed by section 252.385, Florida Statutes, publishes a shelter retrofit report annually. The report provides a list of facilities recommended to be retrofitted for use as public hurricane evacuation shelters. Retrofitting is the modification of an existing structure to make it stronger and more disaster resistant. For example, installing hurricane shutters on an existing building protects doors and windows from wind-borne debris. Such measures bring public shelters up to established safety criteria and increase the availability of public hurricane evacuation shelter spaces in the State of Florida.

Since 1999 significant progress has been made toward reducing the deficit of safe public hurricane shelter space and meeting the American Red Cross's *Standards for Hurricane Evacuation Shelter Selection* (ARC 4496, January 2002). A combination of existing building surveys, retrofitting and application of enhanced hurricane design and construction standards has increased available hurricane shelter spaces to a total of 1,056,283. Another 27,071 spaces (meeting ARC 4496 safety standards) are expected to be available to the public in 2018.

In preparation of the *2017 Shelter Retrofit Report*, the Division reviewed a total of 303 projects submitted by county emergency management agencies in cooperation with other partner organizations (local American Red Cross chapters and school boards) that participate in hurricane shelter planning and operations. After careful evaluation of the proposed projects, the Division, by priority, recommends 150 projects for retrofitting. These projects alone will create an additional 65,303 ARC 4496 hurricane shelter spaces statewide at an estimated cost of \$13,794,763.

A significant increase in public hurricane shelter capacity has been achieved over the past 18 years. This is largely due to the availability of retrofit and mitigation-related dollars to fund these projects. Prior to 1999, the State lacked a dedicated funding source to meet the demands for public shelter space. Since 1999, however, the Governor and the Legislature have committed to fund the State's retrofit program on a recurring basis. Per section 215.559(1)(b), Florida Statutes, the Division is provided \$3 million per year to retrofit hurricane shelters as prioritized in the annually published *Shelter Retrofit Report*. The Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP) has provided approximately \$45 million to harden or retrofit public hurricane shelters during the history of the program. Table 1.1 summarizes the State's progress in creating needed public hurricane shelter space through retrofit of appropriate buildings

The Division's public hurricane shelter deficit reduction strategy focuses on five major components: 1) surveying hurricane shelter facilities in existing local inventories to identify unused space; 2) surveying facilities not currently listed in local inventories to identify additional capacity; 3) providing funding for cost-effective retrofit or other mitigation measures on existing buildings that can provide additional shelter capacity; 4) incorporating hurricane shelter design

criteria into new public building construction projects; and 5) reducing hurricane shelter demand through improved public information, education and behavioral analysis, and decreased evacuation need.

A significant component of the strategy to increase the availability of “safe” hurricane shelter space is construction of new school facilities that comply with the Public Shelter Design Criteria provisions of the Florida Building Code; also known Enhanced Hurricane Protection Area (EHPA) requirements. Table 2.1 illustrates a net gain of 499,670 hurricane shelter spaces since code adoption. Many Regional Planning Council (RPC) regional hurricane shelter space deficits have been eliminated, and consequently so has the requirement to design and construct new schools to the EHPA code provisions. Only one new EHPA school is under construction in the 2017-2018 cycle.

Since 1995, the state has made significant progress toward improving the safety and availability of public hurricane shelter space. On a statewide cumulative basis, the current capacity is about 13 percent greater than the estimated demand calculated in Table 2.1. The metrics are evidence that the comprehensive strategy is an effective means to eliminate shelter deficits. However, RPC regions 6 and 8 currently have deficits per data from the *2016 Statewide Emergency Shelter Plan* (SESP). For Special Needs Shelters (SpNS) nearly all regions have a deficit.

However, changes in Federal Emergency Management Agency flood and National Weather Service storm surge maps reduced the previously recognized quantity of hurricane evacuation shelter space in some regions. The hurricane shelter space figures also do not take into account the aging of the current stock of public shelters nor the approaching end of the useful life of some of the original retrofit projects. In addition, recent population and demographic trends reflected in evacuation studies caused an increase in shelter space demand for 2016 and beyond. These changes and their consequent impacts indicate an increased need for additional hurricane evacuation shelter space.

Specifically, forecasting for the five-year period indicates higher demand for special needs shelters. These demand figures do not take into account the aging of the current stock of public shelters nor the approaching end of the useful life of some of the original retrofit projects. As existing buildings constructed to older building codes continue to age, replacement facilities, such as new construction or retrofit of recently constructed facilities, will be needed to ensure that state shelter capacities meet both current and future needs.

In summary, as the number of Floridians in areas vulnerable to hurricanes continue to grow, it is vitally important that construction of hurricane shelters and retrofitting of existing buildings continue. Full implementation of the Division’s shelter deficit reduction strategy will create a greater level of preparedness, a more efficient capability for responding to incidents and an increased ability to meet the needs of disaster survivors.