II. CURRENT SITUATION

During the last two decades, Florida has experienced major disasters with loss of life and property due to tropical storms, hurricanes and a wide array of other disasters. Of the state's sixty-seven (67) counties, thirty-five (35) of them lie along 8,426 miles of coastline, including tidal inlets, bays, and other waterways. The National Hurricane Center asserts that 40 percent of Florida residents live in areas vulnerable to storm surge.

The proximity of population concentrations along the Gulf of Mexico and the Atlantic Ocean, coupled with generally low coastal elevations, significantly increase the state's vulnerability to hurricane damage, tidal surges, and storm-related flooding. This vulnerability has manifested itself in the need for thousands of safe public hurricane shelter spaces.

The need for safe public shelter space is critical. Nearly 80 percent of Florida's population has settled in coastal areas, which are susceptible to hurricane force winds and damage caused by storm surge. The statewide sheltering deficit situation is not just a coastal phenomenon. The future safety of all our vulnerable citizens prior to and during a hurricane will require additions to the statewide public hurricane shelter inventory. Improved methodology in evacuation studies and a renewed emphasis on registration for persons with special needs created in 2017 an increase in demand for risk shelters that can accommodate persons with a variety of special needs. Risk shelters for people with special needs require electrical generation capability and more space per client, so the retrofit process is more expensive and the resulting spaces do not contribute to deficit reduction as efficiently.

Since recognizing the American Red Cross guidance standard 4496 as the minimum hurricane safety criteria, the Division has endeavored to eliminate the shelter deficit using a multifaceted approach. This approach includes: 1) surveying hurricane shelter facilities in existing local inventories to identify additional spaces 2) surveying facilities not currently listed in local inventories to identify unused capacity; 3) providing funding for cost-effective retrofit or other mitigation measures on existing buildings that can provide additional shelter spaces; 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.

Statewide Progress in Shelter Retrofitting and Enhanced Hurricane Protection Area Construction

Every spring county emergency management offices complete a report with information on their retrofit projects and/or new school facility Enhanced Hurricane Protection Area (EHPA) construction projects. Table 2.1 shows listings of retrofitted spaces, EHPA spaces created through June 2017, and projected gains (contracted or under construction) between September 2017 and August

2018. Additionally, Table 2.1 shows the estimated shelter demand for 2017-2018 (provided via the Division's evacuation studies), the hurricane shelter space adequacy/deficit in each county, and for the state as a whole. There is still need for further effort statewide even with the significant progress demonstrated.

Table 2.1

Hurricane Evacuation Shelter Deficit Reduction Progress 2017-2018

Shelter Capacity That Meets ARC 4496 Guidelines "Post - 1995 Success Stories"

Regional Planning Council	Is the Region in Deficit?	County	1995-8/2017 Retrofit & As-Is Shelter Capacity	Cumulative New School EHPA Capacity	Projected Retrofit Shelter Capacity Under Contract	Projected New School EHPA Capacity	Total Hurricane Shelter Capacity 08/31/2018	Category 5 Demand (General Population and SpNS)	2018 Capacity Sufficient or Deficit Estimate
3	No	Alachua	9,733	1,600	1,088	0	12,421	13,076	(655)
4	No	Baker	1,675	1,612		0	3,287	2,699	588
1	No	Bay	14,944	956	329	0	16,229	8,177	8,052
3	No	Bradford	1,695	0		0	1,695	1,457	238
5	No	Brevard	30,381	12,063		0	42,444	33,578	8,866
10	No	Broward	500	60,005		0	60,505	29,587	30,918
2	No	Calhoun	1,810	172		0	1,982	1,112	870
8	Yes	Charlotte	0	0		0	0	13,386	(13,386)
7	No	Citrus	3,647	208		0	3,855	13,386	(9,531)
4	No	Clay	4,613	2,985	2,815	0	10,413	11,540	(1,127)
8	Yes	Collier	5,784	0		0	5,784	32,010	(26,226)
3	No	Columbia	4,949	4,105		0	9,054	5,111	3,943
6	Yes	Desoto	2,602	151		0	2,753	3,296	(543)

3	No	Dixie	2,562	1,256		0	3,818	1,977	1,841
4	No	Duval	32,036	15,343		0	47,379	45,127	2,252
1	No	Escambia	25,510	1,803		0	27,313	11,591	15,722
4	No	Flagler	24,608	3,034		0	27,642	6,561	21,081
2	No	Franklin	0	0		0	0	534	(534)
2	No	Gadsden	1,917	5,732		0	7,649	3,924	3,725
3	No	Gilchrist	3,129	0		0	3,129	1,200	1,929
8	Yes	Glades	408	388	1,461	0	2,257	1,613	644
2	No	Gulf	232	228		0	460	742	(282)
3	No	Hamilton	0	1,196		0	1,196	1,116	80
6	Yes	Hardee	139	4,623		0	4,762	2,211	2,551
8	Yes	Hendry	5,263	1,000		0	6,263	3,494	2,769
7	No	Hernando	1,416	8,051	3,935	0	13,402	11,617	1785
6	Yes	Highlands	2,451	6,137		0	8,588	11,854	(3,266)
7	No	Hillsborough	27,004	65,699	3,400	0	96,103	55,284	40,819
1	No	Holmes	179	1,191		0	1,370	1,114	256
9	No	Indian River	10,507	0		0	10,507	6,337	4,170
2	No	Jackson	499	3,365		0	3,864	1,902	1,962
2	No	Jefferson	0	809		0	809	948	(139)
3	No	Lafayette	1,136	0		0	1,136	622	514
5	No	Lake	3,414	24,546	778	0	28,738	26,452	2,286
8	Yes	Lee	500	0		0	500	74,751	(74,251)
2	No	Leon	28,002	1,245		0	29,247	4,590	24,657
3	No	Levy	5,057	354		0	5,411	4,206	1,205
2	No	Liberty	836	822		0	1,658	750	908

Table 2.1 continued

Hurricane Evacuation Shelter Deficit Reduction Progress 2017-2018

Shelter Capacity That Meets ARC 4496 Guidelines "Post - 1995 Success Stories"

Regional Planning Council	Is the Region in Deficit?	County	1995-8/2017 Retrofit & As-Is Shelter Capacity	Cumulative New School EHPA Capacity	Projected Retrofit Shelter Capacity Under Contract	Projected New School EHPA Capacity	Total Hurricane Shelter Capacity 08/31/2018	Category 5 Demand (General Population and SpNS)	2018 Capacity Sufficient or Deficit Estimate
3	No	Madison	4,236	0		0	4,236	1,327	2,909
7	No	Manatee	9,735	21,702		0	31,437	24,593	6,844
3	Yes	Marion	7,039	10,257		0	17,296	19,185	(1,889)
9	No	Martin	11,383	10,047		0	21,430	5,755	15,675
10	No	Miami-Dade	73,448	22,499		0	95,947	100,631	(4,684)
10	No	Monroe	723	0		0	723	3,051	(2,328)
4	No	Nassau	326	4,081		0	4,407	5,529	(1,122)
1	No	Okaloosa	11,574	2,025		0	13,599	6,043	7,556
6	Yes	Okeechobee	1,891	1,175		0	3,066	8,671	(5,605)
5	No	Orange	2,530	28,678		0	31,208	31,804	(596)
5	No	Osceola	18,001	7,982	3,159	0	29,142	10,821	18,321
9	No	Palm Beach	22,793	48,355		0	71,148	32,351	38,797
7	No	Pasco	10,199	17,556		0	27,755	32,316	(4,560)
7	No	Pinellas	24,250	10,150		0	34,400	46,274	(11,874)
6	Yes	Polk	2,423	33,157		0	35,580	45,620	(10,040)
4	No	Putnam	3,495	1,196	80	0	4,771	4,848	(77)
4	No	Saint Johns	10,437	7,198	6,820	`	24,455	11,846	12,609
9	No	Saint Lucie	12,997	4,388		0	17,385	10,737	6,648
1	No	Santa Rosa	7,536	5,471		0	13,007	6,041	6,966

8	Yes	Sarasota	4,597	9,296		0	13,893	32,854	(18,961)
5	No	Seminole	30,220	1,206	2,131	0	33,557	12,199	21,358
5	No	Sumter	711	200		0	911	9,824	(8,913)
3	No	Suwannee	50	3,484		0	3,534	3,,966	-432
3	No	Taylor	2,582	2,424		0	5,006	1,777	3,229
3	No	Union	1,371	345	1,039	0	2,755	752	2,003
5	No	Volusia	15,291	8,879		0	24,170	39,650	(15,480)
2	No	Wakulla	0	800		0	800	953	(153)
1	No	Walton	4,028	5,269		0	9,297	1,962	7,335
1	No	Washington	3,609	1,171	36	0	4,816	1,700	3,116
	Page 2 Totals:		297,475	268,991	13,265	**0**	579,731	513,080	66,651
	Page 1 Totals:		259,138	230,679	13,806	**0**	503,623	448,932	54,691
	Subtotals		**556,613**	**499,670**					
	Totals: *		**1,056,283**		**27,071**		**1,083,354**		
	Grand Totals:		**1,083,354**					**962,012**	**121,342**

* For simplicity, all General Population hurricane shelter capacities are calculated based on 20 sq.ft. per evacuee and Persons with Special Needs (PSN) capacities on 60 sq.ft. per client. PSN spaces have been multiplied by a factor of 3 accordingly (e.g., 1,000 PSN spaces = 3,000 General Population spaces).