

Table 1. Major storms affecting St. George Island from 1998 to 2006.			
Year	Storm	Surge (ft)	Rainfall (in)
1998	Earl	5.91	5.00
	George	4.62	6.42
1999	none	--	--
2000	Helene	3.14	9.56
2001	Barry	3.15	6.40
2002	none	--	--
2003	none	--	--
2004	Bonnie	1.0	1.35
	Frances	0	1.12
	Jeanne	0	1.21
	Ivan	5.24	4.11
2005	Arlene	4.67	2.57
	Dennis	8.04	2.07
	Katrina	4.45	0.27
2006	Alberto	3.29	1.79

Vegetation Patterns Across Time:

Coastal areas are strongly affected by tropical storms and hurricanes (Figure 4, with predictions that climate change will lead to a higher frequency of tropical storms. From 1998 to 2004, there were 11 named tropical storms in the area of St. George Island (Table 1). Storms of note include Helene in 2000 (minimal surge but 9+ inches of rain), Barry in 2001 (4+ ft. of surge and 6+ inches of rain), and Ivan in late 2004 (5 ft. of surge and 4+ inches of rain). Then, in 2005, the island was affected by Dennis (7 ft. of surge and 2 inches of rain) and Katrina (5 ft. of surge but minimal rain).

As a preliminary analysis, we have correlated the change DCA1 and DCA2 scores between years with several climate variables, including spring and summer precipitation and temperature (reflecting normal periods of low and high rain, respectively), annual storm surge, and the number of tropical storms. Fore-dune DCA1 scores are marginally positively correlated with storm surge, while DCA2 scores are negatively correlated with measures of flooding. Changes in inter-dune DCA1 scores are positively correlated with mean spring temperatures, while changes in DCA2 scores are not correlated with any of the climate variables. Changes in the back-dune DCA1 scores are positively correlated with spring rain, while DCA2 scores are positively correlated with spring temperatures.